ABSTRACT OF

Contributions

TO THE

PHYSIOLOGY AND PATHOLOGY OF THE MAMMALIAN HEART.[1]

(From the Cambridge Pathological Laboratory.)

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IN studying the action of the mammalian heart we have sought to examine the organ under conditions, unexcised and intact, as nearly approaching the normal as are compatible with the employment of exact methods of research—in short, to make our observations approach in exactitude those which have been made upon the hearts of cold-blooded animals. And we have found two instruments of especial use—one, which we term the "cardiometer," a form of cardiac plethysmograph or oncograph, which records the changes in volume of the whole heart; the other a myocardiograph, whereby we could record the contractions or expansions of any part or parts of the auricular or ventricular walls without interfering with the movements of the heart as a whole. In most cases we employed this instrument to obtain simultaneous records of the contraction of one auricle and one ventricle. These instruments are fully described in our complete paper which will shortly be published.

In order to interpret the results gained by any form of recording apparatus applied to the mammalian heart it is necessary to keep in mind continually certain elements of the mechanics of the subject, for neglect to do this has led to much confusion and erroneous statement. Thus the ventricles may be looked upon as roughly spherical, and it is most important to remember the relationship between the circumference and the cubic contents of a (elastic) sphere, according to variations in the diameter or circumference of that sphere. When such a sphere is enlarged a very slight diminution in its circumference is capable of throwing out a quantity of the contained fluid, whose expulsion in a sphere of smaller diameter would be associated with a very considerable diminution of circumference. For example, reduction by one inch in the circumference of a sphere of five inches in circumference is accompanied by a reduction of the contents equal in amount to that which accompanies the lessening by a quarter of an inch of the circumference of a sphere of ten inches in circumference, although in the one sphere the circumference is lowered one-fifth, in the other one-fortieth. It is important also to keep in mind that the strain on the walls of a hollow spherical shell increases uniformly with the circumference—in other words, that the resistance to contraction of the ventricular walls becomes greater as the circumference is increased. It is well also to note that a change of pressure in the aorta or pulmonary artery has the same effect on the resistance to contraction offered to the left or right ventricular walls as obtains in the case of a parallel-fibred voluntary muscle by increasing or lessening the weight against which it is made to contract by single induction shocks, causing maximal contractions. If the weight be increased, although the same amount of work be done, the extent of shortening in contraction is diminished, and *vice versâ*. An analogous result takes place in the case of the ventricles. When from any cause the resistance to contraction is increased, or the force of contraction is reduced, their walls contract less completely, so that there is an increase in the amount of "residual blood" left in the cavities at the end of systole. The presence of such residual blood can be determined by the cardiometer, and, indeed, by the naked eye, in a variety of conditions, among which, as we proceed to show, vagus excitation is to be included.

Studying the action of the vagus upon the heart, we find that excitation of this nerve slows and weakens or stops the auricular contractions, and this weakening or arrest is a potent factor in bringing about the increased systemic and pulmonary venous pressure and in modifying the action of the ventricles. Up to a certain point the ventricles tend to follow the "sinus" rhythm, and to this extent vagus slowing of the auricles induces ventricular slowing. But when the vagus excitation reaches a certain degree (varying in different animals), the ventricles begin to beat independently of the sinus and auricles; and this rhythm, which is at first slow and irregular, gradually becomes fairly rapid and almost completely regular. This rhythm, we show, must be looked upon as the same as that which, as Wooldridge and Tigerstedt observed, makes its appearance when the ventricles are severed from the auricles. We point out, however, that the independent ventricular rhythm of vagus action is characterised by the slowness with which it establishes itself. This characteristic is due to the lowering of the excitability of the ventricles produced by vagus action, and we adduce a considerable number of facts showing that the vagus *does* lower the excitability of the ventricles, and that, by means of muscarin and by discontinuous stimulation of the vagus, it is possible to isolate the influence of the vagus on the rhythm and force of the auricles from its influence upon the excitability of the ventricles. The power of the vagus to stop the ventricles temporarily can only be explained by this diminution of their excitability. We show that, with a certain degree of vagus excitation, irregularity of the ventricles necessarily results, in consequence of the sinus and the idio-ventricular rhythms interfering with one another; that this is the common cause of irregularity; and that irregularity may also be caused by the auricles not responding to all the impulses which reach them from the sinus.

In consequence of this slowing of the rhythm and lessened excitability of the ventricular walls, the ventricles become distended in diastole, this distension being also aided by the fact that the increased venous pressure must lead to a greater amount of blood being poured into the cavities between the beats. And this dilatation of the ventricles is not simply diastolic, but is also systolic—the ventricular cavities are relatively distended at the completion of systole. It must not, however, be thought that this increase in the residual blood indicates a lessened force of contraction of the ventricular muscle due to the action of the vagus. Of such weakening of the ventricular muscle we find no proof. A consideration of the principles enunciated at the beginning shows that residual blood is not a necessary indication of lessened force of contraction, and that, if the ventricles be dilated, a comparatively slight extent of contraction leads to the expulsion of a comparatively large quantity of blood. And, as a matter of fact, we find that, while through the slowing of rhythm which accompanies vagus excitation, the output of the heart—that is to say, the amount of blood expelled in a given time—undergoes considerable diminution, the "contraction volume" or amount of blood thrown out at each individual beat is not lessened, but, on the contrary, greatly increased. The diminution of arterial pressure does not suffice to explain this increase. We therefore conclude that, as stated above, the vagus does not lessen the force of contraction of the ventricles.

Studying the effect of direct excitation of the nervi augmentores (accelerantes) upon the heart, we show that the acceleration of the rhythm may be extremely slight if the heart be beating fast, and that the acceleration and augmentation of force of the heart bear no constant proportion to one another. The augmentor nerves increase the diastolic expansion of the auricles and also increase their systolic contraction; but these two effects do not go hand in hand. Excitation of the augmentors increases the output of the heart, owing to the increased force and frequence of the auricular contractions, the result of this being that the pressures in the systemic and pulmonary arteries rise, while the systemic and pulmonary venous pressures fall. If there be but little quickening, the contraction volume of the ventricles is increased. The augmentors, on direct stimulation, cause a slight increase in the diastolic expansion of the ventricles, which is passive

[1] Communicated to the Royal Society on Feb. 11th, and printed by the kind permission of the President and Council.

in nature and due to the increased force of the auricular contraction. The force of the ventricular contractions is increased; they contract more completely, diminishing the amount of residual blood, in spite of the fact that the arterial pressure is usually somewhat raised. Reflex excitation of the vagus produces results which are the same as those of direct excitation of the nerve, and the curves are more typical and satisfactory than those obtained on direct excitation. Excitation of a mixed nerve like the sciatic usually produces effects on the heart similar in kind to those due to direct excitation of the augmentors, but the phenomena are complicated by the greater rise of the pressure in the systemic arteries. Sometimes the increase in force of the ventricle more than counterbalances this increased resistance to contraction, and the amount of residual blood in the left ventricle is reduced; in other cases the increase in force of the ventricular contractions is not sufficient to counterbalance the increased resistance, and the residual blood in the left ventricle is increased.

We show that excitation of the central end of a mixed nerve like the sciatic or splanchnic usually affects both the augmentor and vagus centres in the medulla, and that, in nearly all cases, the augmentor centre is the more strongly excited of the two, so that augmentor effects show themselves during the excitation, but are succeeded by vagus action on ceasing to excite the nerve. In many cases augmentor effects alone show themselves. When excited reflexly the augmentor centre ceases to act earlier than the vagus; the opposite, therefore, to what takes place with direct excitation. In rare cases the excitation of the vagus centre may be stronger than that of the augmentor from the first. Although, in the absence of any augmentor action, the vagus does not reduce the force of the ventricular systole, it does unmistakably have the power of inhibiting the strengthening influence which the augmentors exert upon the ventricular contractions. As to the part played by the vagus in the economy, we show that vagus excitation relieves the heart of work, and therefore of waste, to as great an extent as is compatible with a continuation of the circulation, and conclude that the vagus acts as a protective nerve to the heart, reducing the work thrown upon that organ when from fatigue or other cause such relief is required by it. The presence of fibres in the sciatic and other mixed nerves which cause reflex excitation of the vagus would seem to indicate that this nerve may be used by other parts of the body to diminish the output of the heart and lower the blood-pressure, thereby reducing the activity of the circulation as a whole. The influence of the blood-pressure in the systemic arteries on the degree of vagus activity and the readiness with which the vagus centre is called into play by raising the intercranial pressure indicate that the vagus mechanism is specially employed in lowering the circulation so as to limit cerebral congestion. The vagus acts chiefly in the interests of the heart and central nervous system. The power of the vagus over the heart is limited, and the idio-ventricular mechanism which comes into play when the vagus action exceeds a certain limit must be looked upon as the means by which arrest of the circulation and death is prevented, whenever from any cause the nerve exerts a maximum influence. The power of the vagus to lower the excitability of the ventricles makes their temporary arrest possible; but this reduction of the excitability of the ventricles cannot be kept up, no matter how strong the stimuli applied to the nerve, for a period long enough to endanger the economy.

The function of the augmentor in the economy is to increase the work and tissue waste of the heart as part of the mechanism by which the nervous system governs the circulation, and the augmentor mechanism sacrifices the heart in order to increase the output of the organ and enable the ventricles to pump out their contents against a heightened arterial pressure. Such excessive action of the heart is limited by the vagus, which, as we have seen, readily steps in so soon as the call for an increased supply of blood has ceased. It may do so earlier, presumably because the increased blood-pressure or the fatigue of the heart calls for vagus intervention.

Considering the mode of interaction of the vagi and augmentores, we point out that when the vagi are paralysed by section or atropine, the augmentores have no control over the cardiac rhythm, and that therefore they can only act by inhibiting the influence of the vagi on the rhythmic centre of the heart. When neither nerve is acting on the auricles they contract with a certain force, which is increased by the augmentores and diminished or inhibited by the vagi. The force of the ventricular contractions is increased by augmentor action; this increase can be inhibited by vagus excitation, which latter has otherwise no power to reduce the strength of ventricular contractions. The force of the heart's contractions is influenced by other factors than the vagi, augmentores, and other nerves. The pressure of the blood in the coronary arteries is one of the most important of these factors. If this be lowered, the contractions of both auricles and of ventricles diminish in strength, while a rise of pressure in the systemic arteries causes an increase in the force of the heart's contractions, so that the force of the heart's contractions is to a certain extent regulated automatically by changes in the blood-pressure in the aorta, which is one of the variable quantities affecting the work of the left ventricle. Change in the volume of blood in the body affects greatly the contraction volume and output of the heart. Injections into the veins of a volume of defibrinated blood equal to one-tenth of the total blood in the body may double the output. It is important to note here that there is no increase in the strength of the ventricular contractions; increase in the work, therefore, of the ventricles due to increase in the output has no tendency to automatically increase the force of the ventricular contractions, as is the case with rise of pressure in the systemic arteries. We refer to the bearing of this in cases of plethora. Increase of the watery constituents of the blood increases the contraction volume and output to the same extent (though only temporarily) as does transfusion of blood, but acts more unfavourably on the heart, seeing that the work done by the ventricles is increased, while the nutritive value of the blood supplied to the coronaries is diminished. The increased output of the heart both in plethora and in hydræmia is due to rise of pressure in the systemic veins, increasing the volume of blood which enters the right ventricle during diastole. We refer to the bearing of these facts upon the treatment of chlorosis and heart disease.

In strictly physiological conditions, and in spite of the beautiful mechanism by which the force of the ventricular contraction is regulated, the heart, like the voluntary muscles of the body, is liable to fatigue when the work thrown upon it greatly exceeds that required to maintain the circulation under ordinary circumstances. We take as example the increased work thrown upon the organ during active muscular exertion, and show that exertion and endurance of fatigue are limited mainly by the limited power of the heart to continue supplying the increased amount of blood which is required by the acting voluntary muscles. We show that those luxuries which are forbidden or limited in "training," and which are known to hinder prolonged exertion, such as water, alcohol, tobacco, caffein, all directly weaken the force of the heart's contractions, and, in the case of water, place the organ under a disadvantage; also that fatigue of the heart leads to dilatation of the organ. On comparing the power of fatigued ventricles to carry on increased work, as compared with well-nourished, unfatigued ventricles, it is found that not only is the strengthening effect of the augmentor nerves upon the individual contractions less in the former case, but also that the fatigued, and therefore dilated, heart is *per se* unfavourably placed for meeting increase in the work thrown upon it. An explanation is given of the reason why in heart disease failure takes place during exertion. The part played by the vagus in protecting the diseased heart from harmful overwork is referred to, and it is shown that irregularity of the heart in disease may be explained by the mode in which this nerve, when acting powerfully, releases the ventricles from the control of the rhythmic centre in the sinus. The chief forms of rhythmic and arhythmic irregularity are considered, and it is shown that these correspond with the forms of irregularity which can be produced by vagus action. The irregular heart expends more energy, and its tissues therefore are more wasted, for a given amount of work than the heart which is beating regularly. The effect upon the heart of imperfect aeration of the blood is, first of all, to produce powerful vagus action from the medullary centre; this is usually, though not always, accompanied in curarised animals by diminution of the output of the heart. But reasons are given for assuming that the output would be increased in uncurarised animals, owing to the high venous pressure which results from

struggling. Besides the vagus action, it can be shown that asphyxia causes progressive weakening both of the auricles and of the ventricles, and attention is drawn to the fact that the considerable rise of pressure in the systemic arteries in asphyxia is accompanied by vagus effects upon the heart, and not by augmentor action, as is the case, so far as we know, in all other instances in which the vaso-constrictor centre is excited in the normal individual. It is noted that the change in the heart and circulation which takes place during asphyxia points to the conclusion that, when the total amount of oxygen in the blood is lowered, it is for the benefit of the economy that those organs, such as the central nervous system, whose continuous blood-supply is a vital necessity, should be richly furnished with blood by constriction of the vessels of the spleen, kidney, and digestive system, whose blood-supply can be cut off temporarily without danger to life, and also that the heart should carry on the circulation in a manner involving as little as possible waste of its own substance. This, as we have seen, it is the function of the vagus nerve to bring about.

Lecture
ON
TISSUE- OR CELL-FIBRINOGEN IN ITS RELATION TO THE PATHOLOGY OF BLOOD.

Delivered at the Theatre of the Laboratories of the Conjoint Colleges of Surgeons and Physicians, on Feb. 4th, 1892,

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THE first step in the direction of the acquirement of a control over the processes of coagulation in the living body was made by Wooldridge when he succeeded in demonstrating that intra-vascular coagulation could be obtained by the injection of solutions of tissue-fibrinogen. I do not think that I am over-estimating the importance of this discovery; for when it had been confessed by Schmidt's own pupils[1] that the injection of practically unlimited quantities of fibrin ferment into the vessels made the blood more liquid instead of producing coagulation in it, it became evident that there was no possibility of influencing the coagulability of the blood by following the lines of the fibrin-ferment theory. Now Wooldridge's work was a departure on new lines, and he succeeded in the most brilliant manner in demonstrating that it was possible by working upon these new lines to obtain a practical control over the phenomena of coagulation in the living body. It is to the facts that Wooldridge discovered, and to such others as I have been able to add to them or to bring into relation with them, that I would wish to direct your attention this afternoon. And to begin with, I would like to say that in ascribing the credit of the method of producing intra-vascular coagulation to Wooldridge I believe that I am only giving him what is strictly his due; for, although Groth,[2] one of Schmidt's pupils, had described the occurrence of intra-vascular coagulation in connexion with the injection of leucocytes in 1884—i.e., before the date of Wooldridge's publication—he had elicited the phenomena in a much less distinct manner, and he had not determined to what constituent of the leucocyte the intra-vascular coagulations were due. Instead of this he ascribed these coagulations to a production of fibrin ferment in the blood—that is to say, Groth ascribed his coagulation to a cause which we know to be quite ineffective. I think we need not therefore consider a question of priority here; but, on the other hand, we shall do well to keep in view the fact that Groth was successful in obtaining intra-vascular coagulations by the injection of the expressed juice of lymph-glands, and we have to note also that Groth regarded his experiments as conclusive as to the participation of leucocytes in the processes of coagulation. Groth's work thus opens up a number of important issues, which we shall have to consider in connexion with the production of intra-vascular coagulation by tissue-fibrinogen.

First, with regard to the relation of white corpuscles to coagulation, we are met by the fact that Wooldridge not only did not consider that Groth's experiments proved the existence of any such relation, but he went further than this, and expressed it as his opinion that the leucocytes of the blood had not been shown to stand in any relation whatever to coagulation. Wooldridge based this view, for the one part, on certain defects in conclusiveness in the evidence which had been adduced by Schmidt and his pupils to implicate the leucocytes in the processes of coagulation. Schmidt had, for instance, described the superior coagulability of the so-called granular layer which is seen above the corpuscular layer in horse blood which has been kept from coagulation by cooling; and Schmidt had asserted the granules of that layer to be with certainty derivatives of disintegration of white blood-corpuscles, and upon this assumption he had concluded that the superior coagulability of the granular layer was evidence of the participation of the leucocytes in coagulation. Wooldridge, however, pointed out that there was a flaw in this evidence, inasmuch as Schmidt had not excluded the possibility of these granules being derivatives of the plasma—i.e., the possibility of their being simply a precipitate produced in the plasma by cooling. In this connexion Wooldridge showed that peptone plasma gives such a precipitate on cooling, and I may say that I have observed that a similar precipitate can invariably be produced by the action of cold upon decalcified plasma. It follows, I think, that the argument from the superior coagulability of the granular layer must be finally abandoned. Again, with respect to the experiments of Groth and afterwards of Krüger,[3] in which an increased coagulability was observed after leucocyte injections, Wooldridge drew attention to the fact that the experiments were conducted with insufficiently isolated leucocytes, and pointed out that a fallacy was, in his opinion, introduced into them by the fact that the lymph plasma which was injected along with the lymph cells contained a coagulative substance—namely, tissue fibrinogen. Further, Wooldridge repeated the experiments of Groth and Krüger with washed leucocytes, and found that he obtained a diminution instead of an increase of coagulability in the blood. These appear at first sight to be very grave, if not fatal, objections to Schmidt's view of the important *rôle* of the white corpuscles in coagulation; still I hope to be able to show that it is possible to settle satisfactorily with them.

First, with regard to the defective isolation of the cells which was insisted upon by Wooldridge, it must be conceded that Groth's leucocytes were not at all isolated. They were simply injected along with the inter-cellular fluid of the lymph gland. With regard, further, to Krüger's attempt at isolation by means of filtering off the lymph plasma, Wooldridge is probably also correct in stating that this method is entirely ineffective, inasmuch as any attempt to filter off leucocytes from a solution of tissue fibrinogen would be rendered futile by the fact that a considerable amount of tissue fibrinogen would invariably be retained on the filter. It is evident, therefore, that we have to concede to Wooldridge that neither Groth's nor Krüger's experiments were performed with isolated leucocytes.

When we come to the second heading of the objection, which is based upon the fact that the lymph plasma contains tissue fibrinogen, and would thus introduce a fallacy if not effectually separated from the leucocytes before injection, we must, however, pause for consideration. It is not at all necessary to meet this objection by asserting that there is no tissue fibrinogen in the lymph plasma. Wooldridge was a very careful observer, and we may well accept the fact upon his statement; but we may, on the other hand, with advantage inquire how the tissue fibrinogen got into the lymph plasma; and when this question is once formulated, it is easy to see that the answer must be that the tissue-fibrinogen is almost certainly derived from the disintegration of leucocytes, inasmuch as Wooldridge himself has shown that the lymph cells contain this substance. We thus see that if the coagulative substance of the lymph plasma was derived from the leucocytes, the contamination of the leucocytes with this plasma

[1] Jabowicki, Birk, Köhler: Disserts., Dorpat, 1875, 1877, 1880. Edelberg's contradictory results (Archiv f. Exp. Path., 1880) may be neglected. They were obtained with extraordinarily impure fibrin-ferment solutions.

[2] Dissert., Dorpat, 1884.

[3] Zeitschrift f. Biolog., 21, p. 189.

in the experiments of Groth and Krüger cannot be considered to vitiate their results with reference to the connexion between leucocytes and coagulation. Lastly, as to Wooldridge's objection that the injection of washed leucocytes from lymphatic glands produces increased fluidity instead of increased coagulability of the blood, it will be evident among other things that the extraction of the contained tissue-fibrinogen in the processes of washing would easily account for this result, the injection of washed leucocytes being in point of fact equivalent to an injection of attenuated leucocytes.

Having thus cleared our way from the obstacles which seemed at first to forbid us to contemplate the possibility of there being an essential unity in the results obtained by Wooldridge with tissue-fibrinogen injections and the results obtained by Groth and Krüger by their injections of leucocytes, we may proceed to inquire whether there are any positive grounds for assuming the fundamental identity of the phenomena. And here we have, first of all, to note the fact that tissue-fibrinogen—or, as I might perhaps venture to call it, "cell-fibrinogen,"[4]—though found also in the cells of the testicle, and I believe also of yeast—is yet preeminently a constituent of the leucocytes of the thymus and of the lymphatic system generally, and we must regard these leucocytes as at least potential blood leucocytes. Here, then, we have immediately an important link between leucocytes and tissue-fibrinogen. With reference to this, however, we again find that Wooldridge was not satisfied of the conclusiveness of the argument. There might well be, argued Wooldridge, all the difference in the world between the leucocyte of the lymphatic system and the leucocyte of the blood; and further than this there was, in his opinion, distinct reason to believe that the lymph cell puts off its old nature and assumes an altogether new one when it once obtains access to the blood stream. This was Wooldridge's view; and here again, since I wish to push my argument beyond the leucocyte of the lymph to the leucocyte of the blood, I am compelled to dwell a little on the question as to whether a lymph cell is in any way demonstrably different in its chemical character from a blood leucocyte. If I understand Wooldridge aright, the experiment he relied upon as establishing a difference between the leucocyte in the gland and the leucocyte in the blood was the following. He took lymph cells and added them to "strong peptone plasma," which is not coagulable by the addition of leucocytes. He then collected his leucocytes again from this strong peptone plasma and proceeded to add them to a weak peptone plasma, which is invariably coagulable by the addition of leucocytes. The leucocytes which he now added, however, failed to coagulate it, and the conclusion which was drawn by him from this fact was that the leucocytes had undergone some fundamental alteration in their chemical constitution during the period of their stay in the strong peptone plasma. Such a change of nature Wooldridge considered to be associated with the passage of the lymph cell over the threshold of the blood. The experiment in question is, however, hardly sufficient to establish this, and it is not at all difficult to put a different construction upon it than that which Wooldridge attributed to it. I think we are, in fact, constrained to do so in view of the facts which have been elicited by Rauschenbach in connexion with the chemical and physiological properties of the leucocytes. The researches in question I believe conclusively establish that though there is an undoubted line of distinction which can be drawn between leucocyte and leucocyte, that line cannot be drawn so as to include all the white blood-corpuscles in one category and all the lymph cells in another. Rather the distinctions can be more naturally explained with reference to differences in maturation in the leucocytes whether these occur in the blood stream or without it. The physiological differences between leucocytes are apparently only quantitative differences, but they are at least very appreciable quantitative differences, and they permit of our sorting the leucocytes into two classes. The basis of this classification would be the greater or less stability of the leucocyte as shown by its resistance to disintegration when it is introduced into a spontaneously coagulable plasma. It is, however, to be noted that such a coagulable plasma has the power of disintegrating any leucocyte[5] whatever which is added to it, and of using up one of its constituents, not, it must be noted, its paraglobulin, but its tissue- or cell-fibrinogen in the formation of fibrin. When, however, it comes to be a matter of choice, the plasma naturally employs for its purposes the more easily disintegrated leucocytes which have been described by Rauschenbach as the α-leucocytes. These α leucocytes are distinguished from the β leucocytes, also by certain more strictly chemical characters. They, for instance, stain in carmine only with extreme difficulty, whereas the β-leucocytes take on the stain almost instantaneously. Again, the α leucocytes further show their defect in stability by undergoing a slimy metamorphosis when they are treated either with NaCl solutions of moderate strengths, or with dilute caustic alkalies. These characters are, I think, possibly due to the presence of considerable quantities of tissue-fibrinogen in the α-leucocyte.

When these differences between leucocytes had been established Rauschenbach proceeded to the study of what we may call the geographical distribution of the α- and β leucocytes, but it is only possible to glance at the main results of his most interesting work so far as they affect the questions at present more directly under discussion. It is, for instance, of direct importance to us to note that both α- and β-leucocytes are found to be present in the lymph glands, and, further, that the same two varieties of leucocytes are found also in the blood. We thus see that Rauschenbach's observations do not support the theory of the essential duality of the blood leucocytes and the lymph leucocytes. Rauschenbach's work further indicates the lines upon which the explanation of Wooldridge's experiment is to be sought, for we can now see how it is almost certain that Wooldridge must have added to his "strong peptone plasma" a mixture of α- and β leucocytes, and it is probable that he would, under the circumstances, only have recovered the less easily disintegrated β leucocytes from it—i.e., leucocytes whose coagulative power may have been inadequate to bring about coagulation in his weak peptone plasma. The result obtained would then easily be accounted for without the hypothesis of the leucocyte putting on a new nature when it entered the blood. Similarly we could on these lines account for Wooldridge's observation that the inter-cellular fluid of the lymph glands was much more potent in inaugurating coagulation than the isolated lymph cells. The α-leucocytes, which disintegrate easily, would naturally pass into solution in the lymph plasma and impart their coagulative efficacy to it, while the more resistant cells, which survive the chemical processes involved in isolation, probably consist of β leucocytes in which the coagulative power is at its minimum. This may in part account for the relative coagulative inefficacy of the leucocytes employed by Wooldridge in his injection experiments. We shall, however, have to return to this subject at a later stage of this lecture.

We have in this manner, if my arguments are correct, disposed of the objections which Wooldridge raised to admitting the coagulative influence of leucocytes, and we have now only to establish that the phenomena observed after the injection of tissue-fibrinogen are identical with the phenomena seen after the injection of leucocytes, before we proceed to vindicate that wider importance for tissue-fibrinogen coagulations which would naturally accrue to them if they were shown to stand in relation to any increased disintegration of leucocytes in the blood.

I shall therefore proceed to describe to you from Wooldridge's work on the subject and from work of my own, which was directed to follow up Wooldridge's researches, the phenomena observed after the injection into the blood of solutions of tissue-fibrinogen, and I shall then bring these into connexion with the results obtained by Groth by injections of leucocytes into the blood. I may say that I am only concerned here in putting before you the main facts of my work on the subject. The actual experiments and the general details I have already communicated to the Royal Irish Academy, and the paper has just appeared in their Proceedings.[6]

The injection of a solution of tissue-fibrinogen into the vessels is followed by an increase of the coagulability

[4] This term would appear to be a more appropriate one than tissue-fibrinogen, since this proteid appears to occur not in the inter cellular substance of tissue, but in the cells themselves. It appears also to be more widely distributed in free cells than in cells which are found in tissues.

[5] According to Rauschenbach's researches the plasma has the power of disintegrating not only leucocytes, but many other varieties of animal and vegetable cells.

[6] Proc. Roy. Irish Acad., third series, vol. ii., No. 2.

of the blood, which is at its height immediately subsequent to the injection. If the quantity of tissue-fibrinogen injected is large enough, the increase of coagulability leads to the immediate occurrence of intra-vascular coagulation. The coagulation which occurs under these circumstances in the case of the dog occurs only in the portal vascular area; but I have been able to show that we can determine it to any predetermined vascular area by increasing the venosity of the blood in the veins of that particular district, or we can generalise the coagulation and obtain it all over the vascular system, both in the arteries and the veins, by increasing the amount of CO_2 in the blood generally. These alterations in the direction of the "positive phase of coagulation," to use Wooldridge's convenient expression, form, however, only a part of the effects which result from the injection of a solution of tissue-fibrinogen.

We have further to deal with a negative phase of coagulation—i.e., with a condition of diminished coagulability brought about by injections of tissue-fibrinogen. This diminished coagulability was described by Wooldridge in connexion with the blood of the extra-portal vascular areas, where intra-vascular coagulation had occurred in the portal system. I have, on the other hand, I believe, succeeded in establishing that the negative phase of coagulation is due to a general reaction of the system to the injection of tissue-fibrinogen, and that it is possible, by slow injection of moderate amounts of tissue-fibrinogen, to obtain a general diminution instead of a general rise of coagulability. The blood has, therefore, the power of breaking down tissue-fibrinogen into some substance or substances which condition the loss of coagulability. I will here adduce from my note-books an experiment, which seems to me to establish distinctly the sequence of events which I have just described.

EXPERIMENT 1.

Dog 119.—Cannulas inserted into the jugular vein and the carotid artery, and animal anæsthetised with a mixture of ether and chloroform. Samples of blood drawn off from the carotid to determine the condition of coagulability. Sample 1 (5.43 P.M.): Can invert tube at 5.51 P.M.; time, 8 minutes. Ran in 10 cc. of tissue-fibrinogen solution at 5.43 P.M. Sample 2 (5.44 P.M.): Still liquid 1 hour after. Ran in 10 cc. more of tissue-fibrinogen solution. Sample 3 (5.45 P.M.): Still liquid 1 hour after. Sample 4 (5.46½ P.M.): Still liquid one hour after. Sample 5 (5.48 P.M.): Still liquid 1 hour after. Ran in 10 cc. more tissue fibrinogen. Sample 6 (5.50 P.M.): Can invert tube at 5.58 P.M.; time, 8 minutes. Sample 7 (5.51 P.M.): Can invert tube at 6.4 P.M.; time, 13 minutes. Ran 10 cc. more at 5.52. P.M. Sample 8 (5.53 P.M.): Can invert tube at 6 P.M.; time, 7 minutes. Ran in 10 cc. more at 5.54 P.M. Sample 9 (5.55 P.M.): Can invert tube at 6 P.M.; time, 5 minutes. Ran in 10 cc. more. Sample 10 (5.56 P.M.): Can invert tube at 6 P.M.; time, 4 minutes. Ran in 10 cc. more. Sample 11 (5.58½ P.M.): Can invert tube at 6.2 P.M.; time, 3½ minutes. Sample 12 (6 P.M.): Can invert tube at 6.4 P.M.; time 4 minutes. Sample 13 (6.2 P.M.): Can invert tube at 6.9 P.M.; time, 7 minutes. Sample 14 (6.7 P.M.): Can invert tube at 6.14½ P.M.; time, 7½ minutes. Ran in 20 cc. more tissue-fibrinogen solution. Sample 16 (6.14 P.M.): Can invert tube at 6.16 P.M.; time, 2 minutes. Sample 17 (6.16 P.M.): Can invert tube at 6.20 P.M.; time, 4 minutes. Sample 18 (6.19 P.M.): Can invert tube at 6.22 P.M.; time, 3 minutes. Sample 19 (6.22 P.M.): Can invert tube at 6.26 P.M.; time, 4 minutes. 6.26 P.M.: Clamped the trachea to increase the coagulability of the blood, and ran in 20 cc. more tissue-fibrinogen solution. Death occurred instantaneously, and both sides of the heart and the whole of the aorta were found occupied by a solid clot. No clot in the portal vascular area. Urine gave a very distinct biuret reaction.

We have thus proved that the positive and the negative phase are successive in time, and it was evident that the positive phase is associated with the presence of tissue-fibrinogen, as such, in the blood. It still, however, remained to be determined to what the negative phase of coagulability is due, and I have ventured in my paper referred to above to suggest that it is due to the presence in the blood of albumoses which have been split off from the tissue-fibrinogen by the action of the blood. The evidence upon which I based that suggestion is as follows: (*a*) The plasma from the negative phase areas no longer contains any of the injected tissue-fibrinogen. (This, I may remark, is an observation which was made by Wooldridge.) On the other hand, the blood of the negative phase areas was found by me to have acquired the characters of peptone or albumose blood—that is to say, it clots with CO_2, and on dilution. Coagulation can also be inaugurated in it by an addition of lime salts or of tissue-fibrinogen or leucocytes. Further, (*b*), there is a very close analogy between the distribution of the areas of the positive and the negative phase after tissue-fibrinogen injections and the distribution of coagulability after injections of peptone. For instance, the coagulability is in the case of tissue-fibrinogen injections increased up to the coagulation point in the portal area and to a lesser extent in the venous system generally. Similarly in the case of peptone injections the coagulability is retained in the venous system, and especially in the portal venous system, long after it has been lost in the arterial system. Again, the positive phase after tissue-fibrinogen injections can be extended to the arterial system by rendering the blood there venous; and I have been able to show we have something quite similar in the case of peptone injections, for it is only necessary to render the arterial blood venous in order to restore its lost coagulability to it. Lastly (*c*), I would point out that an excretion of albumose or peptone occurs both in the dog and in the rabbit after the injection of tissue-fibrinogen into the veins or into the subcutaneous tissue. Here, again, I think we have evidence that the tissue-fibrinogen is broken down into albumose in the system.

On the whole, therefore, I think we may perhaps regard it as pretty well made out that the occurrence of a negative phase after tissue-fibrinogen injections stands in some close relation with the liberation of albumose by the disintegration of tissue-fibrinogen in the blood.

(To be concluded.)

ON IRREDUCIBLE DISLOCATIONS OF THE GREAT TOE AND OF THE THUMB SUCCESSFULLY TREATED BY OPERATION.

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THE analogies seen in the following two cases lead me to report them together.

CASE 1. *Dislocation of great toe backwards; unsuccessful attempts at reduction; operation; recovery.*—William G——, aged forty years, groom, was admitted into Queen's Hospital, Birmingham, under my care, on June 18th, 1889. Shortly before admission a horse he was riding slipped on a granite roadway and fell on its side, with the patient's right foot beneath it. The man says that his heel came first to the ground, and that the whole weight of the horse came on to the toe of his boot with the foot in a vertical position. The sole of the boot was bent transversely across towards the front of the limb. The pain of the accident was exceedingly severe, and he was unable to stand. On admission the right great toe was found completely dislocated on to the back of the metatarsal bone; it was slightly abducted and was flexed at the phalangeal joint. It could be moved laterally without much pain. The rounded head of the metatarsal bone projected prominently in the sole of the foot, the skin being stretched tightly over it. There was already a great deal of effusion into the tissues. The diagnosis of the injury could be made without any difficulty. Chloroform and ether mixture was given by the house surgeon, and attempts made at reduction by traction and manipulation in all directions. I first saw the man on the following day, and although the parts were much more swollen recognition of the exact nature of the case was quite easy. The limb was thoroughly cleansed with hot water, soap, and turpentine, and an anæsthetic again administered. All attempts at reduction being unsuccessful, the limb was made bloodless by elevation, an elastic tourniquet applied, and a two-inch vertical incision made, with its centre over the head of the metatarsal bone, which lay immediately beneath the skin. The head of the bone was found to have thrust itself between the heads of the flexor brevis pollicis muscle, the internal head of

which was about half torn across. The anterior ligament with its embedded sesamoid bones was torn away from the metatarsal bone, and had "shut back" behind the rounded head, constituting itself the chief, if not the entire, obstacle to reduction. The tendon of the flexor longus pollicis lay on the inner side of the metatarsal bone. With the parts exposed before me I was unable to reduce the displaced bone until I had completely divided the anterior metacarpo-phalangeal ligament and the sesamoid bones by a free vertical incision made in their middle line. Reduction was then effected at once, but the dislocation just as easily recurred. The wounds between the sesamoid bones, the capsule, and the muscle were sutured closely with catgut, and reduction then remained permanent. The tissues around were infiltrated with coagulated blood. No vessel was tied at the operation. The parts were dusted with powdered boracic acid, a small drainage-tube introduced to the deepest crevice in the wound, the skin brought together with wire sutures, and a dry absorbent dressing applied. The limb was put up on a Nevill's splint, to which it was firmly fixed by strapping, and swung in a Lawrence's cradle.—June 26th: Wound dressed for the first time; perfect primary union; tube and sutures removed. Temperature 98·2°; pulse 70.—July 13th: Wound dressed again and found absolutely well, with skin pale and shrivelled and toe in perfect position. No attempts at movement were ordered to be made. The limb was put up in plaster-of-Paris, and the patient was sent home. A few weeks later all the dressings were discontinued, and the man returned to his work without feeling any inconvenience from his injury.

CASE 2. *Unreduced dislocation of thumb backwards; operation four months afterwards; cured.* — Elizabeth N—— aged seven years, was admitted into the Birmingham Children's Hospital, under my care, on Nov. 27th, 1890. From the mother I learnt that about four months previously the child had slipped, and in falling had caught her right thumb against the side of the door. She felt great pain at the time, and was at once taken to the Birmingham General Hospital, where she was seen by a junior officer, who kept her under observation and treatment for more than two months. What treatment was adopted or what opinion was given I could not satisfactorily elicit from the mother, but she seemed very much surprised when I told her that the child's thumb was "out of joint." On admission the thumb was found completely dislocated backwards. The head of the metacarpal bone projected markedly forwards, and was covered by a resistant layer of soft parts. The base of the first phalanx lay behind the metacarpal head, and was slightly abducted. The phalangeal joint was semiflexed and readily movable. When the child closed its fist the thumb stood straight outwards, and could not be brought anywhere near to the flexed fingers. No pain had been complained of for several weeks. On Dec. 1st, the limb having been previously sterilised and an Esmarch's tourniquet applied, I made a two-inch incision over the front of the metacarpal head in the line of the thumb. Below the skin the bone was covered with newly organised fibrous tissue, which was divided, and the articular surface of the metacarpus exposed. The phalanx lay completely behind the metacarpal bone, and had attached to its base the anterior metacarpo-phalangeal ligament which had been torn from its upper attachment, and had "shut back" behind the metacarpal head. The heads of the flexor brevis pollicis muscle had been torn apart, and lay posteriorly to the metacarpal bone, where they had become attached by newly formed fibrous tissue. The anterior ligament was freely divided vertically at its middle, and, after a few fibres of the internal head of the short flexor had been divided transversely, reduction was with little difficulty effected. The tendon of the long flexor was not seen; it certainly did not lie between the bones. Displacement after reduction easily recurred, but was overcome when the divided ligament and muscle were sutured together in front of the metacarpal bone. No vessels were tied. The wound was dusted with powdered boracic acid, and dressed with dry absorbent dressings without drainage. The limb was put up with the phalanges acutely flexed towards the palm, the fingers bent over them, "fist like," and the whole hand firmly bound with bandage. The arm was carried in a sling, and no splint of any kind applied.—Dec. 7th: Wound dressed for first time; perfect primary union; all sutures removed. Temperature 98·4°; pulse 82.—20th: Wound dressed again; quite well; thumb in perfect position, with a little movement of flexion and extension.—27th: Made out-patient, merely wearing a thumb-stall, and without any tendency to return of the deformity. I saw the child a few weeks later, and improvement was still going on, but there was slightly limited movement in the joint when compared with the other limb.

Several theories have been advanced as to the cause of the irreducibility in this class of injury. The one most generally accepted, and the one still taught in most of our modern text-books, is that it depends upon the tight embrace of the two heads of the flexor brevis pollicis muscle, between which the metacarpus is supposed to be thrust as through a button-hole. A point of greater importance, however, lies in the fact that the head of the bone pushes its way through the muscle above the level of the sesamoid bones, the anterior metacarpo-phalangeal ligament being at the same time torn away from its metacarpal attachment, and these two structures, which are closely incorporated with each other, "shut back" behind the protruding head and become closely applied to the anterior part of the articular surface of the displaced phalanx. The "shutting back" of these structures is due partly to their own elasticity and partly to the pull of the remaining attachments to them of all the short muscles of the thumb or great toe. In the first of the above cases the inner head of the flexor brevis pollicis was to some extent torn across, and the neck of the metacarpus was only loosely held by the sides of the rent through which it passed; but the sesamoid bones lay between the base of the phalanx and the back of the misplaced head, and constituted in themselves the sole obstacle to reduction, and when these structures were split vertically the head slipped back to its proper position with the greatest ease. A precisely similar condition existed in the second case. An excellent description of this arrangement of parts was given many years ago by Dr. Laurie.[1] He says: "The end of the metacarpal bone is driven completely through the inner fibres of the external head of the flexor brevis muscle. The anterior ligament is completely torn from the metacarpal bone, and remains attached to the phalanx and sesamoid bones in such a manner that the torn ligament and the sesamoid bones are carried backwards by the phalanx and placed between it and the metacarpal bone. The state of parts is aggravated and rendered permanent by the contraction of the muscles attached to the sesamoid bones and the anterior ligament. The result is that the opening in the ligaments by which the metacarpal bone escaped is thrown back nearly half an inch, and the remains of that ligament and sesamoid bones form a partition between the displaced ends of the bone which forms a mechanical obstacle to the reduction."

Mr. J. C. Wordsworth published a paper in THE LANCET (vol. ii. 1863, p. 443) on "Dislocations of the Thumb at the Metacarpo-phalangeal Joint," showing that the difficulty in reducing them arises from malposition of the tendon of the long flexor. He describes three cases, one of which "was irreducible, and here the long flexor tendon was found between the ends of the bones, having passed round the ulnar side of the head of the metacarpal bone, and by traction having been drawn across the joint." It is possible that Wordsworth's explanation may be the true one in a few cases, but the peculiar displacement of the long tendon between the bones will not be found in all these irreducible dislocations.

The first of my cases is of especial interest, because of the rarity of the accident in the foot, and because, so far as I can ascertain, it is the first dislocation of the great toe which has been treated by open operation. Its likeness in every detail to the analogous injury of the thumb was conspicuously striking, and its treatment by open incision in an exsanguineous limb was simple and satisfactory. The second case is chiefly of interest because of the length of time—four months—which intervened between the accident and the operation. Although much organisation had gone on in the damaged tissues, it was still possible without great difficulty to effect a return of the dislocated bone. It is worth noting, too, how readily displacement recurred in both cases, and how completely this was overcome by closely suturing the opening in the flexor muscle and between the sesamoid bones. This procedure is better than that of excision of the extruding metacarpal head, as has been sometimes recommended. Mr. G. R. Turner read a paper before the Clinical Society of London (Mar. 9th, 1888) on "A Case of Dislocation of the Thumb backwards, in which excision of the head of the metacarpal bone was

[1] Medical Gazette, vol. xxi., 1837, p. 93.

practised eleven days after the accident." The usual anterior incision was made, and "the lateral aponeuroses of the short flexor divided. The main obstacle to reduction was found to be the flexor longus tendon, which had slipped inwards. Dislocation was reduced, but easily recurred. The head of the bone was therefore excised and a good recovery followed." Although there is now but little danger or difficulty in excising the metacarpal head, it appears to me that recurrence can be prevented in the manner adopted in my own cases, and that excision therefore is altogether unnecessary.

Birmingham.

A NEW TREATMENT OF ACUTE GONORRHŒA.

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WITH A NOTE ON THE ACTION OF THIS TREATMENT, AND OF SOME ANTISEPTIC INJECTIONS ON THE GONORRHŒAL DISCHARGE,

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NOT feeling at all satisfied with the results of the various treatments of acute gonorrhœa usually adopted, I devised the following method. The patient is first made to micturate, and thus remove the discharge from the urethra as far as possible. The endoscopic tube, warmed and oiled, is then passed into the urethra, the patient lying on a couch. As a rule the passage of the instrument gives rise to but slight pain, but occasionally in sensitive patients, or where inflammation is very acute, a 10 per cent. solution of cocaine previously injected up the urethra will be found useful. The urethra is then thoroughly mopped with dry cotton wool fixed in a stilet and examined by the electric light. The exact limit of the inflammation can then be clearly seen. It is, as a rule, quite five inches from the meatus; it may be four inches even so early as the third day of the disease. The implicated surface is at once to be recognised by its swollen, bright-red appearance, as contrasted with the rosy colour of the healthy urethra. Occasionally distended vessels can be seen coursing over the inflamed surface. It is important not to pass the endoscope needlessly far beyond the posterior limit of inflammation, which is usually sharply defined. The diseased membrane should be now carefully remopped with dry cotton wool, so as to remove every vestige of secretion and have a perfectly clean surface. A mop of cotton wool on a stilet, and charged with a solution of silver nitrate (ten grains to the ounce of water), should then be passed down the endoscopic tube and thrust through its distal aperture. The tube and the mop are then withdrawn simultaneously. By this means the walls of the urethra contract upon the mop and are thoroughly moistened by the solution. For the two inches of the urethra near the meatus a fresh mop is used, so as to completely saturate this portion of the passage, in which the disease commences, and where also the inflammation is most intense. The patient will always complain of slight burning pain for a few minutes; but this gradually passes off, and in ten minutes or so he feels quite comfortable. He is recommended to take a hot bath at night and to remain quiet, in bed if possible, the following day. The diet is regulated as usual. A saline purgative, with an alkaline or copaiba mixture, is given internally, and the patient is instructed to use a mild cleansing injection, such as Condy's fluid (one drachm to the pint). But it should not be left to his unaided discretion to accomplish this task for himself. There is art even in such a slight proceeding as the administration of an injection. The injection is required to clean the diseased passage, not to distend the canal violently throughout its whole length. A glass syringe with a bulbous nozzle holding *only* two drachms is used. The patient, having micturated, should fill this syringe with hot water, and, removing any air that remains, insert the nozzle between the lips of the meatus, keeping it on the floor of the urethra and pressing these lips from side to side on to the nozzle. He now carefully empties the syringe up the urethra. As the meatus is a vertical slit, if he presses the lips on to the nozzle vertically the aperture will gape, and so the injection will escape by the side of the nozzle and not pass up the canal. Hence the importance of lateral pressure. This warm water is simply intended to clean out the passage. Now he takes the medicated injection and uses it in a similar manner, only this time he removes the syringe but keeps the injection up the urethra quite half a minute by pressing tightly the lips of the meatus. As regards the frequency of injection, the oftener the better. I always recommend quite six times a day, but not the last thing at night time, as the distension of the canal which may result predisposes to chordee. I use only a two-drachm syringe, for after many experiments I have proved that this amount of fluid, when injected into the urethra after death distends the canal completely for rather more than four inches. If this amount be injected into an inflamed and thickened urethra, not to mention its tendency to spasm, more of the urethra must be distended, and this is not only unnecessary, but for manifest reasons unadvisable.

Forty-two cases of acute gonorrhœa have now been treated by me in this manner. With two exceptions the condition had existed in every case for many days, and in several instances was associated with severe chordee. The average time taken before these patients were well was a little under twelve days. As this duration is calculated from the date of the beginning of treatment to the date of the first visit at which the patient was found to be quite free from discharge, the above average result is somewhat in excess of the true time before cure, for more than one patient has stated that he had been already well for two or three days. Early cases, as might be expected, are more amenable to treatment than those which have been established for some time. Two of the forty-two cases attended to were of two days' standing only. In each the inflammation was intense, and had extended backwards about four inches. The urethra was lined with thick purulent discharge clinging to the walls, and so difficult to remove that it certainly would not have been washed away by any injection. The discharges were well mopped away, and the patients treated in accordance with the method described. The result was in each case a complete cure in five days, without a single annoying or bad symptom. Cured cases have been examined with the endoscope, and a perfectly healthy and normal urethra was invariably found. The immediate effect of the treatment is to produce a fairly free purulent discharge during the first twenty-four to forty-eight hours. The pus is thick, and often stringy and very tenacious. The discharge rapidly diminishes in amount after this time, often being quite slight in four or five days. It is watery in appearance, and usually disappears entirely in seven or ten days. From the time the treatment is adopted the patient is quite free from scalding on micturition, and should he have suffered from chordee, the dilatation of the urethra which the treatment entails diminishes, and often abolishes, that terrible complication.

From these results it seems clear that the treatment compares most favourably with the ordinary treatments, for under it gonorrhœa becomes a quite curable disease in a limited time, and does not result necessarily in that only too prevalent disease, gleet. It is not an abortive treatment in the old sense of the term, when powerful caustics were applied blindly and, as a rule, unsuccessfully. The idea of the abortive treatment was, however, less in fault than the method of its execution, and most of the objections to it would be removed if the technique I have advocated had been employed. It is not suggested that a discovery has been made by which every case of acute gonorrhœa can be conducted to a rapid and satisfactory conclusion. There are two classes of cases which cannot be treated successfully by this method: namely, those in which the meatus is abnormally small, so that the passage of the endoscope is impossible; and those in which the disease has extended so far back that it is out of reach of the application. The strength of the solution of silver nitrate may be modified as experience dictates, and the question of a second application will sometimes arise. In none of the forty-two cases has this been found necessary.

The main points of the treatment are: 1. The treatment rests in the hands of the surgeon instead of being left to the patient. 2. The urethra can be thoroughly cleansed, so that there is no doubt that the remedy is applied directly to the affected mucous membrane. Examination of the

urethra by the endoscope immediately after micturition and injection almost always shows that there is still a thick coagulated discharge adherent to the walls, indicating the mechanical difficulty an injection would have had in acting directly on the mucous membrane. 3. The exact extent of the inflammation can be seen, and the remedy applied to its extreme posterior boundary. 4. The remedy is applied to the urethral walls when they are distended and stretched by the endoscopic tube, so that all furrows are obliterated. 5. Stronger applications can be used with safety because the remedy is no longer applied blindly or by unskilled hands, and I have no hesitation in saying that the use of the endoscope allows play for a good deal of delicacy in touch. 6. There is no fear of the application carrying the infected material to the distal part of the urethra, and thus giving rise to complications.

BACTERIOLOGICAL NOTE.

Previous to the employment of the treatment described above trials were made of the value of some antiseptic injections. These were not found, however, very satisfactory, whether regarded from the clinical or bacteriological point of view. Of those injections usually employed, a large number, such as the salts of zinc and lead, boracic acid, sodium salicylate (5 to 20 per cent.), and carbolic acid (1 per cent.), have practically no bactericidal action. Corrosive sublimate in solution of 1 in 20,000 and 1 in 10,000 was shown by Friedheim in the Breslau clinic to be actively antiseptic, but decidedly irritating; the latter strength, indeed, produced intense inflammatory symptoms. Our own experience, while confirming to a certain extent these observations, leads us to attribute both less antiseptic power and less irritating action to the perchloride. The solutions employed were much stronger than the above—viz., one grain to six ounces (about 1 in 2600), two grains to six ounces (about 1 in 1300), and three grains to six ounces (1 in 860). No toxic or inflammatory complications occurred.

For microscopical examination the urethral secretion was collected as pure as possible, spread on a cover glass, fixed, stained with Löffler's methylene blue, and examined with a high power ($\frac{1}{12}$ oil immersion). The examinations were continued for a long time, usually at intervals of from three to six days. With the 1 in 2600 injection the patients experienced a little pain with the first injections, but this soon passed off, and the scalding on micturition was greatly diminished. There was no rapid change in the character of the secretion, which gradually decreased as the case progressed. Microscopically, the discharge became slowly less purulent, and at an early stage the proportion of young epithelial cells to pus cells increased. The gonococci steadily diminished in number and became less typically distributed, but after the lapse of so long a period as thirty-eight days could still be demonstrated. The cases lasted on an average from six to eight weeks, but many patients had still a slight gleet when they ceased to attend the hospital.

With the 1 in 1300 injection better results were obtained. This injection gave rise to no more pain than the weaker solution, and had a more decided effect on the micro-organisms. In several cases the cocci had disappeared in from fourteen to twenty-one days. The changes in the microscopic appearance of the secretion were similar to those following the 1 in 2600 injection, but took place more rapidly. The average duration of the cases was forty days, but during the last ten or fifteen days the discharge was hardly perceptible. The 1 in 860 solution proved too irritating, and did not show any superior bactericidal action over the 1 in 1300 injection. Thinking that some of the lack of success with these injections was due to the formation of a coating of coagulated albuminous material which protected the micro-organisms from the action of the antiseptic, a 1 in 1000 solution of iodide of mercury and sodium was employed. This, however, caused very considerable pain, did not diminish the scalding, and did not appear to be of such value, either clinically or microscopically, as to warrant a persistence in its use. Silver nitrate in solution of from 1 in 4000 to 1 in 2000 was the injection selected as most efficient by Friedheim, and was said to rapidly diminish the number of micro-organisms, and by its astringent action to aid the cure. Such solutions have been long in use at the Lock Hospital, but have for some time been given up as being clinically a failure. The difficulty of destroying the micro-organisms associated with gonorrhœa has long been recognised. This difficulty is not due to the resistance of the gonococcus; it is indeed easily attacked by destructive agents, but apparently is due to the impossibility of reaching it by means of injections. It is well known that though the gonococcus acts at first quite superficially, yet it rapidly passes into the deep layers of the mucous membrane and into the submucous tissue, where it is shielded from the action of antiseptics and covered by a dense layer of purulent discharge. It became obvious from the attempts recorded above, as well as from frequent examinations of the urethra after injections, that to be effective the medicament must be applied in some way which would permit of the perfect cleansing of the urethra from discharge, and render it certain that the solution reached the inflamed mucous membrane. The method devised by Mr. Cotes realises these conditions. The question of the specificity of the gonococcus does not affect the *rationale* of the treatment, since, whatever opinion is held on this point, there is no doubt that Neisser's micro-organism is present in and associated with the purulent urethritis of gonorrhœa.

The effect of the new treatment on the character of the discharge is at once very marked. Examined microscopically, the discharge during the first twenty-four hours after treatment is often chiefly purulent, but in many cases even in so short a time as this there is considerable alteration in the relative number of the pus and epithelial cells. These latter increase rapidly, so that in forty-eight hours a specimen of the discharge has the appearance met with during the third or fourth week in cases by injection. Indeed, in some cases treated early, the discharge at the end of two days consists almost entirely of epithelial cells of various types with a small admixture of pus cells. There is, in addition, a certain amount of exudation, so that the cells are found entangled in a fibrinous material. The effect on the cocci is very marked also. They are very considerably diminished in number in twenty-four hours, and when met with are often free in the exudation or attached to the epithelial cells, while scanty in their usual situation in the interior of the pus cells. This diminution of the cocci goes on rapidly, and their absence from the pus cells and their presence free or in epithelial cells become more marked. In some cases no gonococci can be found forty-eight hours after treatment, and in nearly all cases they are absent after seven days. It is obvious that the local application of silver nitrate solution has a very powerful effect in causing the elimination of the micro-organisms, and that, whether regarded clinically or microscopically, this treatment is most efficient.

ON A CASE OF

HEREDITARY SUPPRESSION OF FINGERS,

AND THE RELATION OF THIS KIND OF DEFECT TO CROOKED LITTLE FINGER, WITH REMARKS ON THE DISAPPEARING LITTLE TOE.

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IN the Guy's Hospital Reports for 1880–81 I described a remarkable family, in which there existed an apparently irrepressible tendency to the production of supernumerary digits—a proclivity so strongly marked that out of a total of eighty descendants traced from a particular individual no less than twenty-four, or 30 per cent., presented supernumerary fingers or toes, and this without any reinforcement by the intermarriage of relatives. In that short paper I incidentally mentioned two other deformities which had attracted my attention by their tendency to hereditary transmission; one of these was harelip and cleft palate, the other the simple and very common defect of a crooked little finger. In the particular family referred to a new defect had made its appearance in one individual in the shape of cleft palate and harelip combined, which, in tracing the family history, I found had been foreshadowed by a harelip which occurred in a great-uncle. With my mind bent on the observation of minor defects which might foreshadow graver evils for future generations, I began tracing back from the greater pronounced deformities to discover anything of a milder nature in the parents or ancestors which might indicate that a particular deformity would be likely

to appear, and I discovered, in reference to cleft palate, that the congenital absence of a lateral incisor tooth of the upper jaw in a parent might foreshadow the greater deformity in the offspring. Three observations bearing on this were recorded in the Clinical Society's Transactions for 1888. Now the other minor defect to which I alluded in the paper of 1880—viz., a crooked little finger—has never forced its importance upon my mind until within the last few months. I said in the paper referred to that I had frequently traced this defect through three generations. It is exceedingly common, this congenitally bent little finger, and therefore is probably in the main merely a general expression of the tendency to suppression of the digit which is so little used, and which is constantly cramped by a large proportion of the population for many hours during the day in the occupation of writing.

That this is the probable explanation of the origin of the defect is borne out by the fact that the little finger when presenting this congenital bend is frequently also abnormally short. Further, the defect of the little finger may not be a mere flexion, but be accompanied by a lateral displacement of the terminal phalanx; or this slight lateral displacement may exist alone, or be associated with a shortened finger. If, as I suggest, the commonly found crooked little finger is but an expression of hereditary neglect brought about by little use and cramped position, it will bear an interesting relation to the fast disappearing little toe. This latter useless little appendage, which is almost as much out of date as the pineal gland, has got before the anatomy books in its downward descent under generations of boot pressure. It has long since lost one of its extensor tendons; so that, if perchance a second one be now found, it is recorded by enthusiastic young anatomists as an abnormality. The flexor tendons are, however, still described as two in number; but so common is the suppression of one of these that a perfect and complete development of two flexors is, I am inclined to believe, falling into that interesting heap of cast-off anatomy amongst which anatomists dig up the homologues of their abnormalities. I am interested to see that Professor Macalister, in his work, states that the second and third phalanges of the little toe are, after a certain period of life, commonly found ankylosed, which is a further proof of the downward descent of this appendage. The future of the human foot would appear to be a gradual suppression from without inwards of the toes, and a further strengthening of the great toe line on the inner side. That this is all that is required is abundantly proved by observing the thousands who, even at the present time, use only the great toe as a means of progression. I was much interested some few years ago by observing the foot of one of the finest athletes of the day. He was an All-England three-quarter at football, a champion short- or mid-distance runner, and the finest football kick of his day; yet he wore a boot so narrow that only the great toe could approach near to the end of it. All this brilliant performance was done by the great toe alone, and he showed on the running path and in the football field that swiftness, agility, and strength were, so far as the foot is concerned, centred in the line of the great toe. The enormous and increasing power of the great toe tendons is further illustrated by the feats of the ballet dancer, and a *première danseuse* would without doubt be soon hissed off the stage if she were seen to balance herself on any part of the foot other than the great toe. There are still some anatomists I believe who affect to be enamoured of the beauties of the savage foot, but its picturesqueness never appealed to my imagination. It is a long-toed, long-heeled, low-arched splay foot, useful no doubt to prevent the limb it supports from sinking too deeply into the native sands, or to aid the hands in upward-tree progression, but as distinct from the civilised foot as the huge hoof of the Shire horse is from that of the thoroughbred. At present the great-toe line of support is apt to rebel against the undue strain put upon it, and gout and osteo-arthritis attack the most used joint of this series at a time antecedent to their appearance in other joints; hence, just as Her Majesty is said to be the most overworked woman in the realm to which hereditary responsibility has fitted her, so the metatarsal phalangeal joint of the great toe, from its responsibility, must be regarded as a queenly joint at present not quite equal to the strain required of it—at least when such strain is associated with a queenly table. So, too, the beautiful longitudinal arch on the inner side of the foot, in weakly, fast-growing lads, and especially when the age of puberty bears a relation to immoral practices, yields under the superimposed burden, and there is a reversion to a lower type and a less elastic tread. But a more general reversion to a lower human type is brought about by syphilis and rickets, which may thus be regarded as debasing diseases, for either of these in hereditary transmission is apt to lead to stunted growth, an ill-shapen head and a flattened nasal bridge, conditions and appearances which are usually regarded as peculiar to a lower type of humanity. But I am straying somewhat from the disappearing little toe and its possible cousinship to the crooked little finger. All the arguments I could adduce in favour of the view that the future of the human foot was a further development of the inner side and a suppression from without inwards of the toes, I put forward in an introductory lecture to my course of Anatomy delivered in 1888; and the idea stimulated the poetic genius of one of our students, who threw the fancy into a rhyme so clever that it may be worth while to reproduce it from the *Guy's Hospital Gazette* of Oct. 13th, 1888:—

"DIGITI MINIMI DECESSUS.

"'*Man is losing his little toe. . . . and can do without it.*'—Mr. Clement Lucas, in his opening lecture.

"If thou must go, thou feeble, foolish digit,
Fain would I speed thy slow degenerate way!
I daily feel a disagreeable fidget
Whenever I've occasion to display
Thy doubtful outline, and thy form chaotic
(Born of a taste in boots, perhaps erotic).
Thou art a shock to my æsthetic sense,
And offerest no kind of recompense
In way of use; of every function shorn,
Except to act as basis for a corn.
When thou art gone I'll still maintain my grace,
Still walk erect wherever I may be;
Still I'll belong to the athletic race,
Waltz with the fair, and kick mine enemy!
So *pace* Schopenhauers, and *pace* Mallocks
When I've acquired a hypertrophied hallux,
To monodactyle type thus simplified,
Life shall be simpler too, and so—beatified.

When future science forgets thee in thy prime,
Methinks a great mind from a northern clime
May then discuss thy remnants, and declare
He finds a true *prophetic organ* there!

F. G. H."

To return to the crooked little finger. I was examining Mr. H. E. G—— for insurance on Nov. 14th, 1891, when I noticed as he presented his hand that the little finger was crooked and short. I asked if there were not others of his family with the same defect, and he replied that his fourth child, a son, had precisely similar little fingers. I pressed him further for his family history as to any similar defects, and after some hesitation on his part I procured the following account. His father and mother he believed to have been perfect, and he knew nothing of their ancestors. His father married twice, and his two half brothers had on each hand the second finger shorter than the third; or, as he put it, the second and third fingers had changed places. Mr. G.'s eldest daughter and second child was born with no fingers on the right hand and a small thumb. One half brother only is married, and he has one child unmarked. I have already alluded to Mr. G——'s fourth child having his father's peculiar little fingers. One of his father's brothers married his mother's sister, and they had five children, one of whom, a daughter, is married and has an only daughter with a thumb absent on the right hand. Another of his paternal uncles is married, and has a family. His eldest daughter, first cousin to Mr. G——, is married and has three children, of whom the eldest, a boy, has no fingers on the left hand. In this family there is shown to be a peculiar tendency to a shortening or disappearance by suppression in development of particular digits, and it is the first instance I have come across which would seem to indicate that shortened crooked little fingers may lie in close proximity to the more serious deformity of further suppression of other digits. It was the observation of the peculiar little finger that led me to obtain the extraordinary history just detailed. It is now well established that a tendency to the production of supernumerary digits is strongly hereditary, but there is less accumulated evidence as to a like hereditary proclivity in the case of suppression of the fingers or toes. It would seem that nature, having arrived at a tendency to suppression in a particular individual—of which the earliest indication may be a shortened or bent finger,—in some of his descendants may sweep away wholesale the fingers of a hand. There is an obvious reason why there should be less opportunity of

establishing heredity in cases of suppression than in superabundance, because in the former the loss is apparent, and is classed by the general public as a deformity to be avoided; whereas supernumerary digits are usually removed by surgeons during infancy, and thus the tendency is concealed.

I am well aware that there is a wide gap of evidence between the suggested origin of the crooked little finger and the establishment of a hereditary tendency to suppression of digits, and it is possible they depend upon two processes so distinct as scarcely to be related. Such suppression as occurs from disuse through generations upon generations, or through ages upon ages, and which I maintain can be shown to be taking place in the case of the little toe, is so gradual and so general that any idea of deformity is completely enshrouded by time. It is only when we observe an abrupt suppression in development that we regard the result in the light of deformity. When such tendency exists, no doubt in-breeding would increase and perpetuate the defect; and it is not improbable that in families where several well-marked instances occur there may have been an accidental union in the parents of two individuals, each with a slight deviation from normal in the direction of the result produced. Hence the importance of observing minor defects which, increasing by generation, may be pregnant with graver deformities in the unborn future.

Finsbury-square, E.C.

THE CONTINUOUS ADMINISTRATION OF OXYGEN IN A SEVERE CASE OF BRONCHO-PNEUMONIA FOLLOWING INFLUENZA; RECOVERY.

BY WILLIAM COLLIER, M.D., M.R.C.P. LOND.,
AND
HORATIO P. SYMONDS, F.R.C.S. ED.

THE patient, a lady aged fifty-seven, was attacked with influenza about the middle of January of the present year, from which she was recovering, when, on Feb. 1st, a relapse set in, accompanied by the development of lung symptoms, which gradually increased in severity. On the morning of Feb. 5th her condition was as follows:—Slightly cyanosed. Temperature 101·4°; pulse 108; respiration 30. Urine free from albumen. She was troubled with a most persistent dry cough, unattended with expectoration, which had been kept in check by the inhalation of the chloroform mixture described in THE LANCET of Jan. 30th. Over the lower half of the lungs, both anterior and posterior aspects, abundant sharp large and small crepitations could be heard. In addition, near the inferior angle of the scapulæ on either side the breathing was bronchial in character, especially so on the right. At 9 P.M. the same day the temperature was 100°; pulse 96; respiration 38. The following morning the patient was decidedly more cyanosed, the respiration had increased to 40 per minute, and her pulse was weaker. On Sunday, Feb. 7th, her condition remained stationary. In the region of the inferior angle of the right scapula the breathing had now become tubular in character and the percussion note dull. A patch of dulness with bronchial breathing was detected over the base of the left lung. On this day we agreed to try the effect of oxygen, and gave it for short periods, with the result of slightly diminishing the cyanosis and improving the pulse. On Feb. 8th (the following morning) the patient was decidedly worse. Her respiration had increased to 50 per minute; pulse 120; cyanosis much more marked. She was lying in a drowsy, semi-conscious condition, unable to sleep on account of the dyspnœa. She had voided very little urine in the past twenty-four hours, which contained a heavy cloud of albumen. We now decided to push the oxygen and to administer citrate of caffeine hypodermically. A good stream of oxygen was turned on, the mouth piece being held well over the mouth. At the end of twenty minutes the respiration had fallen from 50 to 40, the pulse from 120 to 106, and it had improved in character; the lips had assumed a ruddy in place of a purple tint, and the patient was dozing calmly. The stream of oxygen was now diminished and the nurse instructed to keep a small quantity playing over her mouth during the day. At our evening visit we found that she had rested more calmly throughout the day, and that the cough had apparently been much benefited by the oxygen. Her general condition, however, gave us much anxiety, as the rapid improvement of the morning had not been maintained, and it was clear that the mischief in the lung had in no way abated. The nurse was instructed to continue the oxygen throughout the night. On our arrival on the morning of Feb. 7th we found the patient in a critical condition. She was quite unconscious of her surroundings, and could with difficulty be aroused; the cyanosis had much increased; pulse 120; respiration 45. On inquiry, we found that our oxygen cylinder had become exhausted at 3 A.M., and that the patient had been without any for six hours. Two hours and a half later we were enabled to borrow a cylinder in the town, and at once recommenced the administration. She was next seen in the afternoon at 3 P.M., when a distinct improvement was noticed. At our evening visit at 9 P.M. the improvement all round was most marked. The temperature had fallen from 102° to 99°; the pulse from 120 to 104; the respiration from 45 to 38. From this point up to the present time the improvement has been continuous and uninterrupted. The administration of oxygen was kept up throughout Tuesday night (Feb. 9th) and Wednesday, after which it was given for short periods, the intervals between the administrations being gradually lengthened as the lungs cleared, so that for the past few days no oxygen has been required. For some days past the patient's temperature has been normal; pulse about 80; respiration 27. The lung symptoms all point to a gradual clearing up of the mischief.

Remarks.—We would point out that up to the time we agreed to administer the oxygen continuously the patient's condition had steadily grown worse, and that she was then in a very critical condition. The continuous administration was immediately followed by unmistakable improvement, as shown by the marked fall in the rate of respiration and pulse and improvement in colour. The oxygen also enabled her to get more sleep and rest than had been the case for some days. Further than this, it had a marked influence on the very troublesome and intractable cough—so much so that after we had given up the continuous administration the nurses were so certain of the relief likely to follow oxygen inhalation that they gave her a small quantity from time to time to check it. The rapid return of all the bad symptoms on the Tuesday morning, when the patient had been without oxygen for six hours, and the equally marked improvement within a few hours of its readministration, appeared to us a crucial test. The conclusion we formed was that for oxygen to be of value in these cases it should be administered more or less continuously. The oxygen cylinders were supplied daily by Brin.

Oxford.

A CASE OF SCIRRHUS OF THE BRAIN SECONDARY TO THAT OF THE BREAST.

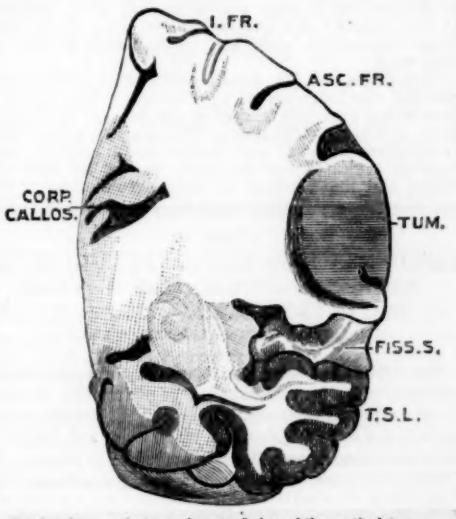
BY THOMAS WILSON, M.D., B.S. LOND.,
HON. GYNÆCOLOGIST TO THE WOLVERHAMPTON AND SOUTH STAFFORDSHIRE GENERAL HOSPITAL.

THE following case occurred while I was resident medical officer at the National Hospital for the Paralysed and Epileptic, and has been recalled by the similar case published by Mr. Beadles in THE LANCET of Oct. 3rd, 1891. For permission to publish the notes I am indebted to Dr. Charlton Bastian, under whose care the patient was.

Charlotte M——, aged sixty-eight, was admitted to the Hospital for the Paralysed and Epileptic, Queen-square, London, under the care of Dr. Bastian, on March 1st, 1887, complaining of fits and left-sided paralysis. In November, 1886, the patient had had her left breast removed in St. George's Hospital, and I am indebted to Mr. Bull, at that time surgical registrar, for his courtesy in supplying notes of the case. From these it appears that a large scirrhous growth, extending from the outer margin of the breast into the axilla, was removed, together with the breast, which contained a very small hard growth, by Mr. Dent on Nov. 18th. The axillary tumour could not be entirely removed at the time of operation, and it was thought that recurrence had taken place before the patient left St. George's Hospital for a convalescent

home. About a fortnight after Christmas the woman was sitting reading one day, when she suddenly began to feel giddy and sick, and in two or three minutes lost consciousness for a short time. During this attack urine was passed, and on coming to there were vomiting and diarrhœa; no paralysis of any part was observed immediately after this attack. Five or six weeks later the patient was wakened from sleep by a feeling as if something were pricking in the left side of the mouth; she got out of bed, and then twitching began at the left angle of the mouth, followed by twitching in the fingers and thumb of the left hand; then the patient fell down, and her head turned to the left and bumped the floor spasmodically. This attack lasted over an hour, the convulsions being almost entirely left-sided, and there being no loss of consciousness. One or two fits have occurred since this, but the woman does not remember anything about them. The left arm and leg have gradually been getting weak since about Christmas, and the patient has noticed that food tends to collect in the left cheek since a week or two after the first fit. There has been slight headache (not localised); no vomiting, except on one occasion after the first fit, as above described. The patient's health previous to the tumour in the breast had been good. She had borne eight children, one dying of "water on the brain" at four years of age. A sister and a cousin on the father's side had cancers; two brothers died of phthisis; there was no other family history of importance. On admission the woman was dull, taking little interest in what was going on around her, but giving quite rational and clear answers to questions. There was some weakness of the left leg, great weakness of the left arm and at the left angle of the mouth, while the movements of the rest of the left face were decidedly, but not greatly, weaker than those of the right; the faradaic and galvanic reactions were normal and equal on the two sides of the face. The left half of the tongue was also weak, and articulation rather thick and indistinct. The knee- and radius-jerks were active, greater on the left, and there was well-marked ankle-clonus on the left side; none on the right. There were slightly diminished tactile, markedly diminished and altered painful, and much diminished thermal sensations all over the left arm and leg and left half of the face and trunk, the sense of position being also very imperfect in the arm and leg, especially the former. The right plantar reflex was active, the left absent; no other superficial reflex could be obtained. There was no hemiopia or any other affection of any of the special senses. The edges of both optic discs were blurred all round, and there was slight swelling of the papillæ, but no hæmorrhages; the pupils were equal and their reactions normal. The heart's impulse was diffused and fairly strong, and a soft systolic murmur was heard at the apex and over the whole left side of the heart; there were a few dry râles in each lung; the urine contained no albumen or sugar. There was a large scar running upwards and outwards in the situation of the left breast; some thickening was felt in the axilla and a few small hard glands just above the left clavicle and in the left posterior triangle. The left arm was much swollen from the middle of the arm to below the middle of the forearm, the swelling being very solid and not easily pitting for the most part. During her stay in hospital the patient complained of occipital and frontal headache almost every night, and there was a little wandering delirium occasionally. The hemiplegia gradually increased, and became absolute by about March 24th.—April 4th: The temperature has been irregularly raised for three days, varying from 100° to 103°; the woman is very drowsy and mutters a good deal; there is occasional Cheyne-Stokes breathing, and there has been complete incontinence for several days, and considerable tympanites came on three days ago and continues. The left limbs are quite flaccid, the right still preserving their tone. Knee-jerk and ankle-clonus have quite disappeared on the left side, the right knee-jerk being present, though slight. There is no plantar reflex to tickling on either side; to prick of pin the right is still rather greater than the left. The patient gradually became more and more unconscious, and died comatose on April 9th. A few hours before death the left lower limb was observed to be very livid and congested, presenting a marked contrast to the right one, and the day before death the œdema of the left hand and arm, which had been very marked ever since admission, almost entirely disappeared.

At the necropsy, made eighteen hours after death, nothing worthy of note was observed about the calvaria or dura mater. On reflecting the latter, the convolutions over the parietal and greater part of the frontal and occipital lobes on the right side were found to be markedly flattened; over the whole left hemisphere there was considerable wasting of the convolutions, with excess of fluid. There was a moderate amount of atheromatous degeneration in all the vessels at the base of the brain. No tumour could be seen on the surface. A vertical transverse section through the lower end of the fissure of Rolando cut through a tumour in the right hemisphere the size of a walnut, hard in consistence, in marked contrast to the adjacent brain substance, which was softened, and from which the tumour was marked off by a pretty sharply defined margin. The colour of the section of the new



Tracing from a photograph, actual size, of the vertical transverse section passing through the lower end of the right fissure of Rolando. TUM., Tumour. FISS. S., Posterior limb of the fissure of Sylvius. T.S.L., Temporo-sphenoidal lobe. 1 FR., Superior or first frontal convolution. ASC. FR., Ascending frontal convolution. In the temporo-sphenoidal convolutions the grey cortex comes out well, but in the upper part of the section the details are very indistinct, owing to the white softening affecting this part.

growth was on the whole greyish yellow, with numerous small hæmorrhages and many small points of fatty degeneration. On its outer side the tumour involved the cortex for about an inch, at one point, situate about an inch above the lower end of the fissure of Rolando, entirely replacing the grey matter; and the growth was limited to the ascending frontal and parietal convolutions, both of which it invaded at their lower ends. The rest of this section of the right hemisphere showed white softening of the whole centrum ovale, and this change was found to extend forwards as far as the genu of the corpus callosum and backwards as far as half an inch in front of the rostrum. The ventricles were distended with clear fluid, and the ependyma thickened and opaque. The pons, medulla, cerebellum, and cord presented no unnatural appearance. An infarction the size of a Tangerine orange was found on the posterior surface of the lower lobe of the right lung. Both lungs were extremely emphysematous throughout. There was considerable fibroid thickening of the mitral and aortic valves, and in the mitral valve were also some small atheromatous foci. The aorta showed merely slight atheromatous change near the heart. The right auricle and ventricle were greatly distended with black fluid blood, and also contained some rather firmly adherent decolorised clot. The liver and kidneys were much congested. No new growths were discovered on careful searching in any of these organs, nor in the uterus or ovaries; but in the spleen two or three small foci were seen under the capsule. There were some small hard glands above the left clavicle, and along the posterior border of the sterno-mastoid. There was no definite sign of recurrence

in the old operation scar, except just in one part, where there was a little hardening. Under the microscope the cerebral tumour presented the typical appearances of scirrhous carcinoma.

This case is one of very great interest from many different standpoints. In the first place, it would appear that, after all, scirrhus affecting the brain is not a very uncommon affection. Mr. Beadles notes in his communication that in a total of 202 post-mortem examinations in cases of cancer growths in the brain substance were found in four cases, a proportion of 2 per cent.; and doubtless many cases of secondary and some of primary cancer in the brain run their course either with no symptoms at all, or with such indefinite ones that they are not diagnosed before death, and are not found afterwards from want of examination of the cranial cavity and its contents. But where the growth is situated in or near the motor area of the cortex, as in Mr. Beadles' case and the present one, the symptoms thrust themselves upon one, so that even he who runs must read.

Thus in the case now under consideration grave cerebral mischief was indicated at the beginning by epileptiform attacks and gradually increasing hemiplegia. The gradual onset and the distribution of the paralysis, the headache, epileptiform attacks, and double optic neuritis, taken together, indicated that the disease was in the right hemisphere, and that it was in all probability a tumour; while the removal some time previously of a tumour of the breast, and this tumour having been proved to be scirrhus, made it in the highest degree probable that we had to do with scirrhus of the brain. Further still, the mode of onset and spread of the convulsions in the second attack, as described in the history, showed that the irritative lesion at that time bordered closely on the cortical motor centre for the left lower face, which is situated at the lower part of the ascending frontal and parietal convolutions, and the correctness of this indication was beautifully demonstrated at the necropsy. In passing it may be remarked that the occurrence first of a sensory aura (pins and needles), immediately followed by clonic spasm in the same parts, is of interest in connexion with the theory that the motor area of the cortex contains sensory cells. The relation of the case to the surgery of the brain is also of much interest and importance; for if the indications afforded by the history and present state of the patient had been correctly interpreted and acted upon soon after the second fit, there can be little doubt that the tumour could easily and safely have been removed, and thus the patient's life prolonged, and the softening, which would seem to have been secondary to, and probably in some way caused by, the tumour, possibly prevented. Taking all the circumstances of the case into consideration, however, it is quite open to doubt and argument whether this would have been a desirable consummation.

Wolverhampton.

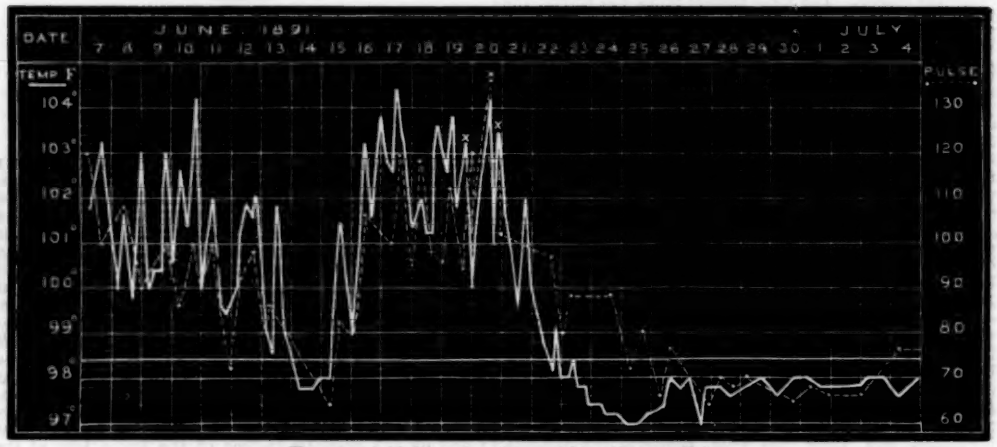
A CASE OF

INFLUENZA PNEUMONIA TREATED BY THE EXTERNAL APPLICATION OF COLD.

BY WM. GORDON, M.A., M.B. CAMB., M.R.C.P.,
PHYSICIAN TO THE DEVON AND EXETER HOSPITAL.

VERY little has been said about cold sponging for the reduction of temperature in influenza pneumonia. Certainly in the dangerous pneumonias occurring in elderly people I am sure the less said about it the better; and, indeed, in many such there is very little temperature to reduce. But I believe there are a few cases in younger patients where life is in peril, largely from the effect of continued high fever, and where it becomes needful to reduce this fever in some way or other. Quinine may fail, as in the instance I am going to relate, and when the choice lies between cold and some depressing drug, such as antipyrin, I should certainly prefer cold. In THE LANCETS of Jan. 31st and Feb. 7th, 1891, Dr. Fenwick's valuable analysis of 1000 cases of ordinary lobar pneumonia demonstrated the advantage of cold in sthenic cases of that disease, and it was chiefly from the perusal of his paper that I felt induced to try the effect of cold in the present instance. This instance is the only one in which I have used it, because no other case coming under my notice has presented what I consider the indications for it—viz., a previously sound patient and a high temperature of sufficient duration and degree to be in itself a source of danger.

Charles W——, aged twenty-eight, an hotel servant, was admitted to the Devon and Exeter Hospital on June 7th, 1891, suffering from pneumonia of the left base. He had been of temperate habits and in good health until attacked by influenza a week previously. In spite of cough and malaise, he remained at work up to the morning of his admission, when he was seized with severe stabbing pain in his left side. When admitted his temperature was 101·8°; pulse 120; respiration 24. There was then little to be detected except fine crepitation over the left lower lobe. Sputum rusty. He complained greatly of pains in the back and limbs, as well as of the pain in the left side. Ten



The crosses (×) indicate the points at which cold was applied.

grains of salol were administered for the former, and for the latter a broad piece of strapping was applied round the left half of the chest. This double relief procured him a fair night's sleep. A mixture was given containing quinine, iron, and nux vomica, with some liquor ammoniæ acetatis. During the next few days the physical signs became more developed. There was friction below and outside the left breast, while tubular breathing and bronchophony became marked over the back of the lung. Dulness finally reached as high as the spine of the scapula, accompanied by complete loss of vocal fremitus, weak breath sounds, and ægophony. The heart's apex could not be felt, but the right border of the cardiac dulness extended a quarter of an inch to the

right of the right edge of the sternum. On June 12th there was much improvement: the rusty tinge began to leave the sputum, and the physical signs indicated commencing resolution in the lung and absorption of whatever fluid had been poured into the pleura. On the evening of the 13th the temperature was normal, and by the morning of the 15th the patient seemed on the high road to recovery. Towards night, however, the temperature rose again, and on the 16th friction sounds, fine crepitation, tubular breathing, and bronchophony, with dulness, were all present at the right base. At the same time the signs in the left lung began again to extend. On the 18th there were gastric pain and tenderness, with vomiting of everything, and on the night of the 19th violent noisy delirium set in, with a temperature of 103·2°; respiration 40; pulse 120, but regular, slight cyanosis and intense thirst. Except that the pulse remained regular, and that its rate was not excessive for his temperature, he seemed as bad as he could be. The delirium I thought was due partly to the long-continued fever (including the first attack), and partly to the insomnia caused by the fever. So at midnight he was placed under the ice-pail arrangement mentioned by Dr. Fenwick. After an hour the temperature was 101°. The pails were then removed, and a further fall to 100° occurred in the next half hour. The result was a very marked improvement in his condition, the violence of the delirium abating. There was no untoward symptom, no tendency to collapse. In the morning he continued better, but still wandered a little in mind. A dose of chloral (ten grains) and laudanum (ten minims) was then given. He slept several hours, and awoke quite free from delirium, which never returned. Encouraged by this result, directions were given to repeat the cold as often as the temperature reached 103°. This did not occur until the afternoon of the 20th, when the pulse was 136 and the respiration 52. He was sponged all over with tepid water, which was gradually cooled down with ice. Again the temperature fell to 100·4°, with marked improvement, the pulse falling to 118 and the respiration to 40. At 10.30 P.M. the temperature again reached 103°, and again he was sponged. From this time the temperature fell steadily except for evening rises, and was subnormal on and after the 23rd. The pulse and respiration fell more slowly, and the latter did not reach normal, but continued at a rate of twenty-two breaths per minute. (I have observed this same persistent rapidity of breathing in other cases, even with a very low pulse-rate.) On July 15th he went to the seaside almost quite well.

It will be noticed that at no time was there any approach to hyperpyrexia. The cold was used simply to minimise the depressing influence of a pretty steady temperature of 103° to 104°. I do not think the patient could have recovered if we had allowed the fever to maintain its level, and I have no doubt about the very obvious and decided improvement after each application of cold. Every care was taken to avoid unduly prolonging the application, the cold being removed when 101° was reached; also to avoid too rapid cooling.

Exeter.

TWENTY CASES OF FIBRO-MYOMA AND OTHER MORBID CONDITIONS OF THE UTERUS TREATED BY APOSTOLI'S METHOD.[1]

BY J. INGLIS PARSONS, M.D.,
PHYSICIAN TO OUT-PATIENTS, CHELSEA HOSPITAL FOR WOMEN.

ELECTROLYSIS OF ORGANIC TISSUES.

FOR convenience this can be divided into a polar and an interpolar action. As there is considerable difference between them it is necessary to consider them separately. The polar action is distinguished by the collection of acids and bases at the positive and negative poles respectively. It follows, then, that some of the tissues must have been deprived of these bodies, which are thus found in a free state of dissociation. Since this deprivation may be expected to exercise a profound influence on the nutrition of the tissues concerned, it is important to ascertain its origin—whether in fact it takes place from the tissues in contact with the poles or from those lying between them through which the current passes, or from both. Before entering on this question it is necessary to point out that a secondary effect is produced at each pole, by which acid and alkali albumen are formed, and as the accumulation increases a caustic action is developed, which may cause absolute destruction of tissue. This caustic action appears to be most powerful at the positive pole, because the acids are more destructive than the bases. Most observers, including Apostoli, consider either that the poles are equal in this respect or that the excess is on the side of the negative. If the process be watched on the web of a frog's foot under the microscope, there can be no doubt that the positive pole is the more destructive. Extensive coagulation is also seen at this pole, while it is almost absent at the negative.

Coming now to the interpolar action of the current, we find that it is quite different. For instance, there are no free acids or bases to be found, consequently there is no secondary caustic action—in fact, no change can be seen in the frog's foot under the microscope, although we know that something is going on. In the first place a transport of elements occurs. When the acid is separated from its base, one or both of them must cross the intervening space to reach their respective poles. That they do not do this in a free state can be proved by the electrolysis of a solution of iodide of potash, so arranged that there is a solution of starch in the interpolar region but not at the poles. Although iodine is found at the positive and potash at the negative pole, no discolouration of the starch occurs in the interpolar region. The transport of elements appears to exercise a denutritive effect, which in the case of tumours cannot easily be made up again, but which in the healthy tissue is soon recuperated, and, like the effect of moderate physical exercise of the muscles, leads ultimately to increased nutrition. A more important point is to ascertain whether the acids and bases found at the poles are extracted from the tissues in contact with them, or from those in the interpolar region, or from both. In a paper published in March, 1888, I demonstrated by experiments with simple salts that the molecules in the interpolar region were not decomposed by the current, although an exchange of atoms between them took place during the passage of the current. Since then the late Dr. Steavenson demonstrated by experiment that the acid of a simple salt in the interpolar region can be made to give up its base in exchange for another and a different element. The conclusion to be drawn from this is, first, that the current does not deprive the interpolar region of any of its molecules, although it can under certain circumstances alter their composition. The importance of this from a practical point of view can hardly be over-estimated. For instance, if a tumour lies within reach of the electrode we can not only deprive some of its tissues of various acids and bases, but we can also cauterise and destroy some part of its substance; whereas, if it lies in the interpolar region, we can at the most only influence its nutrition by the transport of elements and subsequent polarisation and possibly some osmosis.

Porret's observation that osmosis occurred through a porous partition between certain liquids during the passage of electricity is not of much practical value. It is more than probable that this only occurs to a very limited extent between living cells, because even in the laboratory it is not very manifest unless a strong current is used with badly conducting fluids, conditions which do not often occur in the human body. The same may be said of polarisation. After the passage of a current the human body acts like a secondary battery, and becomes stored with electricity, which is gradually given off in an opposite direction to the original current. It is very doubtful whether this has any therapeutical effect of any importance. I have always found that the quantity of electricity thus disposed of represents but a small fraction of the original current.

FIBRO-MYOMATA.

Electrical Resistance.—When the constant current is applied to the uterus of normal size and position by one electrode intra-uterine and another on the abdominal surface, the direction taken by the current is along the abdominal wall, down the side of the pelvis, across the broad ligaments, and through the walls of the uterus. If the fundus touches the abdominal wall, it then passes directly through. When electricity is applied to a uterine tumour, the current may either pass directly through the abdominal

[1] Paper read before the Obstetrical Society of London, Jan. 6th, 1892.

wall to the tumour, or, if the tumour is large and has a high resistance, it may pass along the capsule and not touch the central portion, or, again, it may miss it entirely and go round by the broad ligament. It depends entirely upon the conductivity of the tumour as compared with the tissues surrounding it and the healthy tissues. It is necessary to bear this in mind when giving a prognosis in any case, and much of the success of the treatment will depend on its recognition. I have found by experiment that the fibrous tissue of an old fibroma has a very high resistance, about ten times that of muscle; while the capsule is very often a better conductor than the substance of the tumour. In my own experience it is impossible on this account to produce any effect on fibrous tissue by the interpolar action; the current misses it out entirely, or else passes by the more fluid cells which are in contact with it Of course it can be destroyed by the caustic action of the poles. The relation of the tumour to the intra-uterine electrode must be taken into account. For instance, if a tumour is submucous and the electrode is brought into direct contact with it, and it alone, the current must of necessity pass through. With an intra-mural tumour we never can be sure that this takes place, and it will only be acted on if its resistance is the same or lower than that of the tissues surrounding it. A large tumour, other things being equal, has a lower resistance than a small one, because the resistance of a conductor is inversely proportional to the area of its cross section. It becomes evident from the foregoing that before we form an opinion in any given case we must consider: (1) the position of the tumour in relation to the cavity of the uterus; (2) its relation to the abdominal wall; (3) its age and consistence, whether hard or soft; (4) its sectional area.

Method of Application.—For the external electrode nothing answers so well as Apostoli clay; although other substances can be used, they are more likely to produce ulceration of the skin. For the internal electrode I have used a copper stem, insulated, and terminating in a platinum end from which the current is given off. The copper stem, on account of its pliability, is very useful when the uterine cavity is distorted and the sound only passes with difficulty.

The results of fourteen cases of fibro-myomata obtained by treatment have been as follows:—

Hæmorrhage—In all cases this has been arrested or improved. In six cases the subsequent history has been traced out to March, 1891, and up to this date no return of hæmorrhage had occurred. In Cases 1 and 2 a period of over three years has passed without any relapse since the treatment was begun, although in each case the hæmorrhage threatened life, and everything had been tried without avail except abdominal section. Case 6 was not so successful, the hæmorrhage was controlled and kept within bounds as long as the treatment was carried on, but she always relapsed at the end of a month or six weeks if it was discontinued. I advised removal of the appendages, but the patient refused. I heard from her in March, 1891. "You will be pleased to hear that I am better, and do not lose so much." In Cases 13 and 14 only a few applications were made, but even then it was stopped, in one for over a year, and in the other for six months. In three cases—Nos. 5, 9, and 12—it was reduced to a normal amount, but I have not been able to trace out the subsequent history. In quite half the cases there was an increased loss at the commencement of the treatment, but especially with those of a severe type.

Pressure Symptoms.—The relief in this direction was most marked, and I think can only be explained by a diminution in the size of the tumours. It can easily be understood that even a slight shrinkage in the size of a tumour would afford great relief to various structures which had already, to a great extent, accommodated themselves to its presence. This was very marked in Case 13 She was unable to take more than a few short steps at a time, from pressure on the sacral plexus and consequent loss of power over the muscles of the lower extremities. The muscular weakness disappeared after three applications. On the other hand, Case 4, who suffered from pressure on the bladder, showed no improvement after several applications, because it was an unsuitable case. The tumour was ten years old, and probably composed of fibrous tissue alone, which I have shown is almost unaffected by electricity. In contrast to this the bladder symptoms of Case 14 disappeared entirely after eight applications, although the tumour was also ten years old, but then it was much softer, and therefore more amenable to the influence of the current.

Diminution in Size.—That this takes place to a limited extent in most cases no one with practical experience can deny. The amount to expect will depend on the size and consistence of the tumour. An old hard tumour composed of fibrous tissue alone, as in Case 4, remains unaltered, while a soft tumour (Case 11) entirely disappeared. This case is a remarkable one, because the patient became pregnant two years after treatment, showing that it is no bar to conception. This fact might be of the greatest importance if an heir to a title were required. It is evident that removal of the appendages would destroy all possibility of so favourable an issue. In one instance (Case 7) the tumour was removed on account of its size; although electricity had stopped the metrorrhagia and removed the pressure symptoms, the diminution in size was not sufficient. The patient, who was single and had to get her living as a governess, was always open to unkind remarks on account of the size of her abdomen. Dr. Travers successfully performed hysterectomy.

Pain.—If the current be used too strong it is invariably followed by some pain in the abdomen for a day or two following the application; but this soon passes off. Local pains are often relieved after one application. Dysmenorrhœa in suitable cases usually disappears gradually.

Galvano puncture.—Differences of opinion are often expressed upon this point. In properly selected cases it is most useful. At the same time I cannot go as far as Apostoli. He advises that this measure should be resorted to when the blunt electrode cannot be passed, or when a salpingo-ovaritis has not been sufficiently relieved by intra-uterine applications, or when a fluctuating tumour presses into the vagina and demands rapid evacuation. Nothing, to my mind, can be more hazardous than to drive a sharp trocar into a projecting tumour in the uterine canal when we are unable to estimate with precision its position either by touch or sight. His method in this direction appears to me to be faulty. The steel trocar recommended by Apostoli has only a celluloid sheath to protect the vagina. As a consequence, after each puncture a small sinus is left communicating with the vagina, a condition of affairs which is very likely to lead to septic infection, in spite of antiseptic precautions. The trocar which I use has in addition a loose sheath, a second insulation, which does not project above its surface. When a puncture is made this insulating material is in contact with the healthy tissues, while the bare metal lies in the tumour, and the cauterisation is confined to the latter alone. By this means no sinus is left, the seat of puncture is closed in a few hours, and the risk of septic infection is reduced to a minimum. All the punctures were made through the anterior vaginal wall, although Apostoli advises that this should never be done. The tumour lay between the uterus and bladder, and there was no other way of getting at it.

Unsuitable Cases.—Many cases in addition to those described have come under my notice, but they were unsuitable for treatment. Such cases come under the following heads:—1. Old-standing hard tumours, over ten years' duration, causing pressure symptoms without hæmorrhage. 2. The presence of pronounced disease either of the ovaries or tubes associated with, or secondary to, a fibro-myoma. 3. Slow-growing tumours that give rise to no symptoms. 4 Fibro-cystic tumours. Of this class Case 16 is a good example. Several applications were made, but the tumour continued to grow, and abdominal section was finally performed by Dr. Travers. The treatment failed in one case of hæmatocele and two cases of anteflexion with severe dysmenorrhœa. It succeeded in a case of neuralgic dysmenorrhœa and one of primary amenorrhœa.

Conclusions.—Apostoli's treatment is of great value in a large proportion of cases. 1. It stops the growth of the tumour, sometimes reduces its size, and may possibly cause its disappearance. 2 It stops hæmorrhage in most cases. 3. It relieves pain and pressure symptoms. 4. It does not prevent pregnancy.

Queen street, Mayfair, W.

ROYAL UNIVERSITY OF IRELAND.—The following examiners have been appointed for the current year:—Medicine: J. F. O'Carroll. Midwifery: J. W. Byers and A. J. Smith. Medical Jurisprudence: M. F. Cox and C. Y. Pearson. Materia Medica: F. J. Quinlan and William Whitla. Ophthalmology: D. D. Redmond and H. R. Swanzy. Sanitary Science: Sir C. A. Cameron and Anthony Roche. Chemistry: E. A. Letts.

THE ELECTRIC DOUCHE.

BY W. S. HEDLEY, M.D. EDIN., &c.

AT page 281 of his book on Electro-therapeutics Erb mentions the electric douche. No information, however, is given beyond a reference to a paper by Trautwein. I have not been able to get access to this article, nor am I aware whether the subject has any other literature. It is therefore because it may possibly interest those who are in the same position that I venture to put together the few following points, which are the outcome of an experimental inquiry recently undertaken for my own information. The action of electrised water by means of the electric bath has long been recognised as by far the least painful way of applying the current to the body. But the efficacy of this procedure depends in most cases on a general and distributed action rather than on any strictly localised effects. The electric douche therefore seems to have been devised as a means of retaining the advantages of the electro-hydriatic method and at the same time presenting facilities for strict localisation and accurate dosage, and securing the advantages of a labile as well as a stabile action. The method of application, apart from certain non-essential details, is much of the nature of what would be known in hydrotherapeutics as the "movable jet douche" (douche mobile), and the nozzle is so arranged that the electrised stream escapes in the form of a more or less condensed jet or jets, which, with a certain minimum of pressure, remain unbroken and continuous for a reasonable distance after emerging from the pipe, and therefore for that distance retain their electric conductivity. (Of course there ought to be a means of regulating temperature and pressure.) With this arrangement one pole may be placed in contact with some indifferent part of the patient's body, while the other is connected to the internal metal of the douche, with the result that when the douche is set in action the second pole is brought to the patient by and in the fluid, and may be concentrated as a single jet or distributed as many small jets. The fluid is, in fact, the second electrode.

Let us inquire, then, by direct experiment, how much current this water conductor carries, and how much enters the body of the patient. The following experiments are necessarily only a selected few, but a sufficient number of results are quoted to give some general ideas. Details of the apparatus are also as much as possible omitted. It need only be mentioned that, permanent water pressure not being available, a hand pump drawing from a suitable vessel was used for the douche, which was fitted with a nozzle or rose (having its outer edge insulated with india-rubber) of the size mentioned below. The electric apparatus consisted of a Leclanché battery of seventy-four cells (with a milliampère meter in circuit) and a fair-sized induction coil. One pole was attached to a large electrode on which the patient sat, and the other connected with the metal of the nozzle or rose, well insulated wire being used for the connexions. The following results were obtained:—

TABLE A.

Plain water at 98° F., continuous current.

Nozzle.	E. M. F.	Pole to douche.	Distance of nozzle from body.	Current passing.
1. ¼-in. jet (single).	75	−	1·5 in.	5 milliampères.
2. Do. do.	,,	,,	0·5 in.	15 milliampères.
3. Rose 2 in. dia., forty-nine perforations.	,,	,,	1 in.	5 milliampères.
4. Single jet.	,,	+	18 in.	Deflection (taken on reflecting galvanometer) right off scale. Probably quite 100 microampères.

TABLE B.

Salt water (½ lb. to 7 gal.), temperature 98° F., continuous current.

Nozzle.	E. M. F.	Pole to douche.	Distance of nozzle from body.	Current passing.
1. Rose.	75	−	1·5 in.	7·5 milliampères.
2. Single jet.	40	+	18 in.	20 milliampères.

TABLE C.

Plain water, temperature 98° F., alternating current.

Nozzle.	E. M. F.	Pole to douche.	Distance of nozzle from body.	Current passing.
1. Rose.	x	+	1·5 in.	Subject cried out "Stop." Milliampère meter (alternating current) in circuit did not register.
2. Single jet.	,,	+	12 in.	Noise marked in telephone. Subject felt current.

Several readings were taken with alternating current and salt water, all showing that the effect was much stronger with salt water than with plain. These experiments seem to show that electricity can be imparted to the human body by means of the electric douche, provided that sufficient electro-motive force be used and the stream of fluid be continuous. Table B shows that when salt water is used strong currents may be passed over considerable distances with a very moderate electro-motive force. Table C shows that by using coil currents, which always possess a comparatively high electro-motive force, as much current as a patient can comfortably bear may be passed over many inches of space. Its current-carrying capacity being thus established, we may glance for a moment at its possible therapeutic effects.

There was a time in the days of "brutal hydrotherapeutic empiricism," when both physician and patient had a (not altogether inexplicable) dread of the "hydrostatic douche." This, however, has given way before a more enlightened method of administration, and the douche is acknowledged to possess stimulating and alterative properties of no mean order. It seems not unreasonable, therefore, to suppose that in the combined electric and hydriatic procedure we may have a therapeutic agent of considerable power. It claims that, according to variations in temperature, force, and duration, it may be resorted to as an agent more gentle and adaptable than even the "electric hand" of the physician, or may be made to become so potent and concentrated as to prove a veritable electro-hydriatic moxa. It presents itself as a means of general electrisation by bringing the various parts of the body successively under its influence; it claims an action that may be strictly localised; and, further, offers itself as a means of producing, through various motor inhibitory and secretory reflexes, those influences on nervous centres and glands which can undoubtedly be brought about by other and more painful methods of peripheral electrical excitation. If it can establish claims of this kind, a field of usefulness seems to lie before it in a class of cases which readily suggest themselves.

Brighton.

AN INQUIRY INTO THE RELATION THAT EXISTS BETWEEN MILD AND SEVERE FORMS OF SOME DISEASES.

BY E. DONALDSON, B.A. T.C.D., L.R.C.P.I., &c.

IN the different departments of science well-marked phenomena lead us to look for or infer the existence of less striking examples of the same or similar phenomena. Prof. Jevons, in his "Principles of Science" (p. 549), writes: "We must regard those changes which we can observe as the comparatively rare aggregates of minuter changes. On a little reflection we must allow that no object known to us remains for two instants of exactly the same temperature. If so, the dimensions of objects must be in a perpetual state of variation." He quotes Prof. Tyndall, as follows: "An upright iron stone influenced by the earth's magnetism becomes a magnet with its bottom a north and its top a south pole. Doubtless, though in an immensely feebler degree, every erect marble statue is a true diamagnet, with its head a north pole and its feet a south pole. The same is certainly true of man as he stands upon the earth's surface, for all the tissues of the human body are diamagnetic." He further illustrates this truth: "The sun's light produces a very quick and perceptible effect upon the photographic plate; in all probability it has a less effect upon a great variety of substances. We may regard every phenomenon as an exaggerated and conspicuous case of a

process which is in infinitely numerous cases beyond the means of observation." We find the same truth exemplified in physiology and pathology. Parturition has its minor manifestation in menstruation. Shelley wrote of "Death and his brother Sleep." The "oral whiff" is an exaggeration of the cardio-pneumatic impulses which can be detected in most, if not all, persons. Dr. Hughlings Jackson says: "A fit of epilepsy is an excessive caricature of the normal physiological process during what is called a voluntary action." Mr. Hutchinson has pointed out that rare diseases are sometimes exaggerated forms of what is common. There is a principle which governs the relation between mild and severe forms of some diseases, and which appears not to be recognised in medical writings. The principle is that some well-marked varieties of disease can only occur in communities where less marked varieties are not uncommon. If we find in a community rare cases of astigmatism of six dioptres, we are sure to find a large number with less astigmatism. If we find more cases of severe myxœdema in women than men, we may conclude that milder forms of this disease are oftener found in women than men. The functional activity of the thyroid is greater in women. Complexity of function without corresponding complexity of structure practically lowers the level of evolution, and Dr. Hughlings Jackson has taught us that disease frequently first attacks the least organised parts. Hence the fact that women have myxœdema more than men comes under the law of dissolution—the reverse of evolution.

To what diseases does the principle that the worst cases occur amongst those who suffer most frequently apply? It applies to diseases in which inherited predisposition plays an important part—e.g., myxœdema, exophthalmic goitre, Raynaud's disease, &c. It holds good also where there is no marked inherited predisposition, as in myopia. In other cases there is no relationship between frequency and severity. A disease may be equally liable to occur in the two sexes or at any age, but owing to greater exposure to exciting causes one sex or persons of a certain age may suffer oftenest. Infants have purulent ophthalmia less severely than adults, and oftener. If this principle is not recognised error is likely to follow. A physician of great experience writes as follows: "If I may judge from my own experience, these rudimentary cases of Graves' disease are more common in men than in women. Men, as everyone knows, are much less frequently affected with exophthalmic goitre than women, and it would appear (at all events as far as I can judge from my own experience) that when men do become affected with Graves' disease the clinical picture is apt to become imperfect." If the principle I have mentioned applies to exophthalmic goitre, it will be found that women suffer oftener than men from the mild as well as from the severe forms. Von Graefe was probably in error when he said that exophthalmic goitre was more likely to be fatal in men. A distinguished ophthalmic surgeon writes that bad myopia is found oftenest amongst hospital patients, while the benign form is found oftenest amongst private patients. Mr. Priestley Smith has met this by statistics and arrived at a different conclusion—one that is quite in harmony with the principle I am discussing. The question as to the relation that exists between mild and severe myopia is rendered difficult by the fact that some cases of severe myopia differ etiologically from the milder cases. These cases are not, however, sufficiently numerous to vitiate the conclusion that the severest cases occur amongst those who suffer oftenest.

Some difference of opinion exists as to whether mild cases of myopia and albuminuria are to be looked upon as physiological or pathological. It would be well to look on this question in the light of the principle that in communities where the mild forms often occur the severer forms are likely to occasionally crop up. It was thought that albuminuria occurring in association with acute infective diseases was sometimes due to high temperature. It is probable that many of these cases are really mild forms of parenchymatous nephritis due to the different poisons acting on the kidneys.

Londonderry.

LUNACY CASE.—An action against Dr. Littlejohn and Dr. Hay of Edinburgh for £1000 and £500 damages respectively, on the ground that they did "falsely, wickedly, and maliciously swear that the pursuer is a dangerous lunatic," was heard by Sheriff Orphoot in Glasgow on the 18th inst. The pursuer conducted his own case, and, after hearing both sides, the sheriff took the case to avizandum.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. MARY'S HOSPITAL.

SOME INTERESTING SKIN CASES.

(Under the care of Mr. MALCOLM MORRIS.)

WE present our readers this week with an interesting series of cases illustrating four of the rarer kinds of cutaneous eruptions. Case 1 is recorded because of the apparent absence of a source of contagion and on account of the rarity of the affection in England. Kral has made some interesting observations with regard to the nature of the fungus in this disease, the result of which he gave to the International Medical Congress in Berlin. Case 2 describes a chronic and obstinate affection, also of unusual character, which ultimately yielded to treatment. Mr. Malcolm Morris, who has had Case 3 under observation since 1878, thinks this undoubtedly a case of Hebra's prurigo from a consideration of the following facts: The relapses of severe eczema, the above attack being an example of the length of time the disease has persisted, the existence of large indurated inguinal and femoral glands, the extreme irritation, the thickening of the skin, and the great depth of the natural furrows. With reference to Case 4, Mr. Malcolm Morris regards this sudden appearance of the erythematous band, separated from the original mischief by healthy tissue, as an additional argument in favour of the essentially erythematous and neurotic character of lupus erythematosus. The patient is a stout and well-nourished woman, who, however, suffers slightly from asthma. For the notes of these cases we are indebted to Mr. L. E. Parkhurst, house physician.

CASE 1. *Favus of the Scalp.*—F. S——, aged ten, was admitted to St. Mary's Hospital on Oct. 20th, 1891. He was sent to the hospital from an inland Somersetshire village. There was no history of exposure to infection or of any source whence infection might have arisen; no cats or canaries in the house. It occurred first when the boy was three months old, and has persisted ever since, growing steadily worse in spite of treatment. No other members of the patient's family have suffered, although he has for years past shared a bed with a younger brother. On admission the head was found to be covered with the characteristic yellow crusts, with mousy odour, extending all over the scalp. The hair was scanty, there was great irritation, and the general health was poor. Hyposulphite of soda fomentations were applied every four hours, and cod-liver oil and iron given internally; subsequently fomentations of resorcin solution. He is still in hospital, but there is marked improvement in every way. The irritation of the scalp early disappeared, and the crusts are all gone. New hair is growing everywhere on the scalp. General health greatly improved.

CASE 2. *Relapsing Pustular Dermatitis of Palms and Soles.*—C. K——, aged fifty, married, was admitted to hospital on Nov. 6th, 1891. There was no history or suspicion of syphilis. She had facial erysipelas eighteen months ago, and when convalescent noticed a breaking of the skin on the soles of the feet, which then discharged a watery fluid; this next attacked the palms. Pustules first appeared twelve months back; they were very painful until pricked, and used to come out in crops, the average duration being about a week. She has not been able to put her feet to the ground for more than a year. She was seen from time to time as an outpatient, but no improvement resulted. She then presented a dry, deeply fissured dermatitis of both palms, with numerous deep-seated pustules over the thenar and hypothenar eminences, about a quarter of an inch square, and containing a thick creamy pus. These are very painful until they are lanced. On the feet there is hypertrophy and thickening of the skin of the soles, with similar deep-seated pustules, but no deep fissures; there are also patches of psoriasis on the knees and elbow; the condition of the palms and soles, however, in no way suggested psoriasis, but was rather of an eczematous character. She was treated at first with a salicylic ointment, and subsequently

a weak and then a strong tar ointment. She improved greatly, especially when given biniodide of mercury internally; this is curious, as syphilis is not suspected. She was troubled at first with urticaria, and until the strong tar ointment was used had crops of pustules from time to time. She was discharged on Jan. 15th, 1892, quite well. There were no pustules after the end of November on the hands, but they persisted about a fortnight longer on the feet. She can now stand and walk without pain. The general health has all the time been excellent.

CASE 3. *Hebra's Prurigo.*—A. H——, aged twenty-seven, was admitted to hospital on Dec. 7th, 1891. When three months old a red raised spot appeared on the left cheek, which gradually spread and affected the whole body, save the nose, forehead, lower lip, scalp, and soles of the feet. One of his earliest recollections is the excessive irritation of his skin and the consequent scratching thereby set up, and the itching has continued ever since, but with occasional intervals of slight amelioration. He has suffered severely from asthma and chronic bronchitis for many years. Three months back, and suddenly (after getting heated from some slight labour) the irritation became more than usually severe, and affected the abdomen in the first instance; the skin in this region felt hot, became red, then inflamed, and discharged "a watery matter," and assumed a deep purple colour. On the legs a similar condition followed in a few days, but more gradually; it began to spread up the abdomen, and then appeared in the arms, but independently and not by direct extension. On admission he presented a rough, dry, scaly skin, which was greatly thickened, and had all the natural furrows deepened. On the arms were numerous blood crusts, a multitude of deep fissures, and a discharging eczema; the legs were similarly affected. The front of the lower abdomen was occupied by a deep pigmented—not erythematous—patch of purple colour and irregular but sharply defined outline above, merging into the redness and eczema of the legs below. There was no exudation from the surface of the abdomen, and no papules could be made out owing to the great thickness of the skin. He was suffering from asthma and bronchitis somewhat severely, and had slight fever. He was treated at first by cod-liver oil massage, followed by a mild tar ointment. The skin condition has improved greatly, and the pigmentation over the abdomen has quite gone, but the asthma is worse than ever.

CASE 4. *Lupus Erythematosus.*—E. C——, aged twenty-four, was admitted to hospital on Dec. 10th, 1891. The disease appeared first on the skin of the cheeks (she thinks both about the same time were affected) in 1884, and has been very intractable. She was in hospital in 1887, in 1888, and again in 1891. It has gradually spread, and assumes at present the typical butterfly outline with numerous scars indicating the atrophic stage. There are also on the scalp two dry scaly patches, quite distinct from that on the face, which have also reached the atrophic condition. The interesting feature about the case is that in October last the patient noticed one day that a faint rosy band had appeared outside the old eruption, extending round the chin from temple to temple, and this has gradually darkened, until on admission it presented the appearance of a band of simple erythema one inch wide, and separated by a narrow band of healthy skin from the old eruption, which it in no place joined. This has gradually darkened, and is getting purple, but there is no sign of scarring. Treatment has been directed to the old patch only, and has consisted in cautery (twice applied), followed by a salicylic acid ointment. She has improved greatly.

METROPOLITAN HOSPITAL.

LIGATURE OF THE LINGUAL ARTERY FOR HÆMORRHAGE FROM EPITHELIOMA OF THE TONGUE.

(Under the care of Mr. WALSHAM.)

HÆMORRHAGE in consequence of epithelioma of the tongue ulcerating into the lingual artery is not very common. In this case, owing to the ulcerative chasm being far back in the tongue and the patient being unable to open his mouth widely and protrude that organ, it was difficult to determine the exact source of the hæmorrhage. As the bleeding on admission was very severe perchloride of iron was at once applied to restrain it. This treatment was successful for a time, but on the recurrence of hæmorrhage Mr. Walsham was sent for. The lingual artery was easily found and tied. The hæmorrhage ceased at once, and the wound for exposing the artery healed by the first intention. Mr. Walsham proposed removing the gland and the tongue by Kocher's method, but the patient would not give his consent. The indications for the performance of this operation are mainly four: (1) Before removal of the tongue; (2) for hæmorrhage after removal of the tongue; (3) in cases of malignant growth of the tongue too extensive for removal &c; and (4) in some cases of macroglossia.[1] For the notes of this case we are indebted to Dr. Marshall, senior house surgeon.

John M——, aged fifty-two, was admitted to the hospital on Dec. 11th, 1891, with severe arterial hæmorrhage from the mouth. On examination the tongue was considerably fixed on the right side, and a new growth, apparently epitheliomatous in nature, was found involving the posterior third of the right side of the tongue and the floor of the mouth. The growth was deeply ulcerated, and at one spot a cavity was found passing deeply into the base of the tongue. On the right side of the neck was a mass of indurated and enlarged glands. The hæmorrhage was checked temporarily with perchloride of iron, but in the course of about four hours it recurred to such an extent as to endanger the patient's life. About six hours after admission Mr. Walsham was sent for and ligatured the right lingual artery in the submaxillary triangle. The hæmorrhage, which had stopped, but recurred whilst the patient was on the operating table, immediately ceased.

On Jan. 3rd the patient left the hospital, no further hæmorrhage having occurred since the operation.

SOUTH DEVON HOSPITAL, PLYMOUTH.

CASE OF ATROPHIED KIDNEY, WITH PERINEPHRITIC ABSCESS; NEPHRECTOMY; FÆCAL FISTULA; RECOVERY.

(Under the care of Mr. WHIPPLE.)

THE most likely explanation of this case seems to be the following. Five years ago there was a small calculus in the pelvis of the left kidney. This eventually blocked the ureter, causing atrophy of the kidney, and later on ulcerated through into the descending colon, and was thus got rid of. The present abscess was probably caused by the escape of some intestinal contents into the perinephritic tissues. In removing the kidney, which was adherent to the colon, where the stone had ulcerated through, some damage was done to the wall of the latter, leading to formation of the fæcal fistula. At the operation the escape of fæcal-smelling gas occurred long before the kidney or colon was reached, and certainly was not due to a wound of the colon. For the complete account of this case we are indebted to Mr. W. Gifford Nash, late house surgeon.

M. B——, aged thirty-eight, wife of a marine, was admitted on Aug. 1st, 1891. She stated that she began to suffer pain in the left loin five years ago. At first the attacks of pain occurred at intervals of three or four months, but latterly every three or four days. The pain, which was very severe on the left side of the abdomen, caused vomiting. During the last year the pain had been more constant, and had radiated to the left groin and thigh. For the last three weeks the pain in the thigh and knee had been severe and the thigh had been flexed. Four years ago she had frequency of micturition for six weeks, but latterly had only passed urine twice a day. Two years ago micturition was painful. When admitted she was a well-nourished woman, complaining of pain in the left loin, thigh, and knee. The left thigh was flexed. There was a distinct swelling in the left lumbar region, reaching as low as the crest of the ilium and extending upwards under the ribs. It had a hard rounded border in front, was extremely tender, and apparently fixed. Fluctuation was not obtained. There was no frequency of micturition, and no pain was felt during the act. The urine was acid, sp. gr. 1010, and contained a trace of albumen; under the microscope were seen numerous pus cells, but no crystals, blood, or casts. In two days she passed ninety-eight

[1] Jacobson: The Operations of Surgery, p. 482, second edition.

ounces of urine. On Aug. 5th the swelling was explored by the lumbar incision. On cutting through the lumbar aponeurosis and exposing the hard and condensed perinephric fatty tissue there was an escape of gas with a foul fæcal odour. On tearing through the condensed fat, an abscess, containing about three ounces of pus, was opened. The kidney itself was found to be extremely shrunken, and was therefore removed. In doing this it was much torn, as it was intimately adherent to the surrounding tissues. The lumbar muscles were sutured with catgut and the wound closed, except where a drainage-tube was inserted. On Aug. 8th there was a little fæcal discharge from the wound, which continued for a week. The patient, after the operation, immediately lost all the pain in the loin and groin, but a sinus remained until the silk ligature on the pedicle of the kidney came away on Nov. 26th. After this the sinus healed, and the patient was able to leave the hospital on November 30th. The kidney removed was about the size of a testis. The cortical tissue was the seat of chronic interstitial nephritis. There was nothing found to account for the atrophy or the perinephritic abscess.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY

Antiseptic Preparations of Catgut and Silk.—Torsion of the Spermatic Cord.

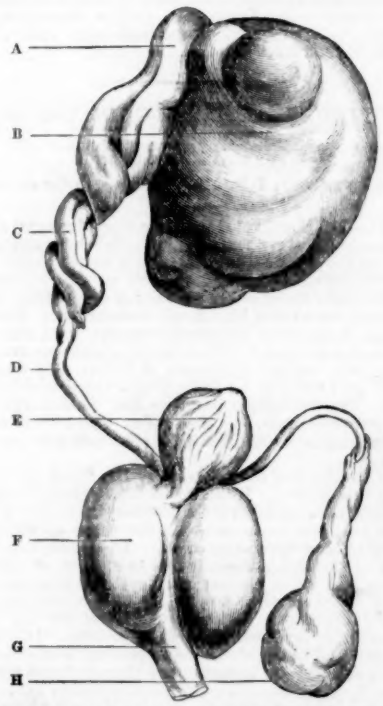
AN ordinary meeting was held on Tuesday, Feb. 23rd, Mr. Timothy Holmes, F.R.C.S., President, in the chair.

Mr. W. G. MCPHERSON (Army Medical Staff) supplied a paper on Antiseptic Preparations of Catgut Silk and their relation to Wound Infection (communicated by Mr. A. Bowlby). The author first alluded to the observations of various surgeons on the causation of suppuration in wounds by ligatures supposed to be aseptic, and then described his own experiments. These were conducted in three series: (1) Experiments testing the purity of dry material supplied by surgical instrument makers; (2) experiments testing the purity of material preserved in "antiseptic" solutions; (3) experiments with specially contaminated silk to test the antiseptic value of such solutions. Control experiments were also made. A description was then given of the preparation of the silk used for surgical purposes, and it was pointed out that in its manufacture it was subjected to various processes which were well calculated to destroy any organisms it might contain, although this was not the object directly in view. The various experiments and their results were then given in detail, and attention was particularly directed to the results obtained with different kinds of material, the object of the writer being to ascertain the most reliable material for ordinary surgical use, and the best means for preserving it in an efficient condition. The following conclusions are then drawn:—(1) All so-called "antiseptic" preparations must be received with considerable caution, and there is good reason for rejecting such preparations of catgut; (2) asepsis can with certainty be obtained by the cheapest, simplest, and most efficient means of all—namely, by boiling or steaming; (3) material thus rendered aseptic may be readily kept aseptic in bottles containing no solutions of any kind; (4) the methods of keeping ligature material aseptic by means of solutions, as suggested from time to time by various surgeons, are unnecessary; (5) the most aseptic material sold by surgical instrument makers is probably the fine undyed silk twist, untreated by any antiseptic material.—The PRESIDENT said he had never experienced any ill effects from the use of catgut for ligatures and sutures.—Mr. HOWARD MARSH mentioned a case in which he had amputated through the thigh. He had used catgut, carbolised and sent direct from the instrument makers', for his deep ligatures. In spite of every care at the time of the operation, within forty-eight hours the wound became foul along the tracks of the sutures and ligatures, and the case finally terminated fatally. In his own mind there was no doubt that this was due to a septic condition of the catgut and of the carbolic preservative fluid. At St. Bartholomew's Hospital there was a profound mistrust of material obtained from the instrument makers' for ligatures, and no house surgeon would think of allowing anything to be used which he had not himself prepared. When properly prepared he thought that there was no particular difference in this respect between silk and catgut, though he himself preferred silk.—Mr. BARWELL referred to a paper of his on tying arteries in their continuity, which he had formerly read before this Society, in which he had quoted from a work on the preparation of catgut how that the intestine was first partly macerated for the removal of everything except the muscular coats, and that the muscular coats still containing putrefactive organisms became converted into catgut, and without further sterilisation were stored in carbolised oil, which was known not to be a sufficiently powerful germicide for their destruction. He kept his materials for sutures and ligatures in solutions of perchloride of mercury or of carbolic acid for long periods before using them.—Mr. BRUCE CLARKE had for several years given up catgut kept in carbolised oil for silk rendered aseptic by boiling. He described the form of bottle in use at St. Bartholomew's Hospital for storing ligatures. These bottles were ordinarily kept corked, and were filled with some antiseptic solution. During use the cork was removed, and a rubber cap which was kept in the antiseptic solution in the bottle was stretched over its mouth and the ligatures drawn out through it.—Mr. STANLEY BOYD referred to the work that had been done on the Continent on this subject, by which catgut kept in carbolic oil had been for some time condemned. He mentioned Volkmann's case, in which a patient died of anthrax, produced by a catgut ligature, which had originally been made from the intestines of a sheep which had died of anthrax. He believed that it was important that the material used should be non-absorbent, and he used silkworm-gut for deep sutures and horse-hair for superficial ones, and found both very satisfactory.—Mr. GOLDING BIRD agreed with Mr. Boyd that the texture of the substance used was of great importance. Those substances which were least liable to be digested—such as silk-worm gut, silk, or wire—were the best.—Mr. WATSON CHEYNE agreed with the general feeling which had been expressed as to the unreliability of the materials as they were supplied by the makers, and said that he should never think of using anything which he had not himself rendered aseptic. He had not experienced much suppuration from the use of catgut sutures or ligatures, though they might contain putrefactive bacilli, as Mr. Barwell had stated, which were not destroyed by after treatment with carbolic oil. It was probable, however, that micrococci rather than bacilli were most injurious to wounds. At King's College Hospital the materials, as obtained from the makers, were loosely reeled and rendered aseptic by immersion in strong carbolic solution (one in twenty). He agreed with the first three conclusions of the author; but with the fourth, though perhaps unnecessary for experienced bacteriologists, who were aware of the many sources of contamination, yet for others he thought that it would be safest for them to use some antiseptic solution in which to keep their sutures and ligatures.—Mr. HEYWOOD SMITH thought that silkworm gut was the best material for sutures.—Mr. BOWLBY, on behalf of the author, stated that one reason why he had recommended that ligatures should be preserved in a dry state was that they were then somewhat less liable to be a source of bacterial infection, as it was well established that organisms required some moisture for their development. In the paper silkworm gut had not been referred to, as it was unsuitable for ligatures on account of its stiffness.

Mr. THOMAS BRYANT communicated a paper on Torsion of the Spermatic Cord, with Strangulation of the Testicle. The author recorded a case of this hitherto unrecognised affection, which occurred in a boy aged fifteen, with an imperfectly descended testicle, and which he saw in consultation with Dr. Fox of Barnet, in September, 1889. The case in many points simulated one of strangulated hernia; indeed, it was at first so diagnosed. In an exploratory operation undertaken for its relief its true nature was at once revealed, when an imperfectly descended testicle, black from venous congestion brought about by complete torsion of the cord, was exposed. Three half-twists made inwards completely untwisted the cord, and an attempt was made to save the testicle, as it was quite warm. The wound healed kindly after the operation, but the testicle wasted. A good recovery ensued. When this case first occurred it was thought to have been unique, but in the summer of 1891 a preparation was forwarded by Mr. G. Nash, of the South Devon Hospital, to the Royal College of Surgeons

for examination, which was clearly of the same kind. This case is therefore fully quoted by the author, with the account of the preparation as given by Mr. Targett, the Pathological Curator to the College. In both of the cases brought forward the twisting of the cord took place in boys; in both the accident affected the left side, and in both there was an incomplete descent of the affected testicle. In the author's case the torsion took place within the inguinal canal; in Mr. Nash's case it was reported to have occurred in the external ring. No explanation of the process by which the torsion of the cord was brought about is attempted, for the author states that neither accident, nor any of the changes which take place in the organ during its physiological descent, seem capable of helping us towards a solution of the problem. That cases similar to the two now published have occurred before the author has no doubt, and he is equally sure that such cases have been described amongst those of inflammation of an ectopic testicle. He believed that one such has been published by Mr. Jacobson (p. 471 in vol. iii. of Mr. Holmes's last edition of his "System of Surgery"). He also maintained that if his own case had not been operated upon, its true nature would never have been recognised; and if it had been allowed to run its natural course, it would probably have been described as one of gangrene or disorganisation of the testicle from acute inflammation. He was disposed to think that many of the cases of atrophy of the testicle which has taken place after a supposed inflammation coming on without any clear cause are of this nature, the strangulation of the cord in such cases being less severe. As an appendix to the paper the author gave a case of the same kind, which was reported to him by Dr. W. Keen, of Philadelphia, United States, and which in every way supports the views put forward by the author.

The Secretary then read a communication from Mr. BLAND SUTTON describing a specimen of Axial Rotation of the Testis in an old pug dog, and the specimen was exhibited. In it the cord of the right testicle (which contained a large tumour) had



A, Epididymis. B, Testis. C, Twisted cord. D, Vas deferens. E, Bladder. F, Prostate. G, Penis. H, Testes in sac.

rotated two and a half times, the disposition of the organs being shown in the accompanying figure. Cases similar to those of Mr. Bryant had been described by Nicoladoni and Cohen in Germany, and abstracts are furnished by Bramann in Langenbeck's Archives, vol. xl.—Mr. W. G. SPENCER showed a specimen which had already been recently exhibited by him at the Pathological Society, which, though somewhat resembling, was not really similar to Mr. Bryant's cases.—Mr. HULKE asked if in Mr. Bryant's cases there had been long mesorchia. He referred to a paper which he had read before this Society in 1866, in which he had described large sacs in the scrotum, in which the testes had floated in and out of the peritoneal cavity, suspended by long mesorchia.—Dr. HERBERT SPENCER referred to Mr. W. G. Spencer's specimen, and asked Mr. Bryant if at the time of the operation in his case he had noticed any band. He was of opinion that extravasated blood at the time of birth sometimes prevented the descent of the testes into the scrotum, and that a band sometimes remained in after life as a sign of this extravasation.—Mr. BRYANT, in reply to Mr. Hulke, said that in this case the testicle was only just showing through the external abdominal ring, and that there was a long mesorchium; in reply to Dr. Spencer, he said the testicle was rotated one and a half times, and there was no sign of any band.

MEDICAL SOCIETY OF LONDON.

Arthrectomy.—Epithelioma of Tongue.—Old Dislocation of Shoulder treated by Operation.—Floating Spleen.—Friedreich's Disease.

A "CLINICAL EVENING" of this Society was held on Feb. 22nd, the Vice-President, Mr. Reginald Harrison, in the chair.

Mr. CLUTTON exhibited three cases in which he had performed Arthrectomy by a new method for the relief of tubercular disease of the elbow-joint in children. During 1888 four such cases were submitted to operation at the Victoria Hospital for Children, one of which had eluded search, though when last seen the result was quite equal to that in those shown. The operation consisted in opening the joint by dividing the olecranon and removing all the diseased structures with a sharp spoon and scissors. The parts were reunited and kept absolutely at rest. No passive movement was at any time performed, and a plaster-of-Paris splint was continued for three or four months. The range of movement now present was obtained entirely by the patients themselves. The results were seen to be but little short of the normal. If the cartilages at the time of operation were firmly fixed to the bone beneath and the wound kept aseptic, the joint would not ankylose, even though it be kept at rest for some months; whereas if the cartilages be detached and a movable articulation be required, the ends of the bones must be removed as in the ordinary method of excision.

Mr. BRUCE CLARKE exhibited a case of Epithelioma of the Tongue which had been seen in the gummatous stage, but, the patient having absented himself for many months, the disease was now too far advanced for operative interference. He proposed to inject a solution of aniline dye with a view of exhibiting the effect to the Society on some future occasion.—Mr. MARMADUKE SHEILD mentioned a case in which he had injected pyoktanin into a malignant growth without obvious effect. He remarked that the development of the growth in the centre of the tongue, as in the case exhibited, was unusual, though he could recall two others.—Mr. WATSON CHEYNE alluded to three cases of malignant disease, two being sarcoma, so treated, in which no improvement resulted. In one diffuse suppuration occurred in the neck after injection by the mouth.

Dr SIDNEY PHILLIPS showed a man affected with Acromegaly who had attended among his out-patients for sciatica. So far as could be gathered from the history, the patient being unaware of the condition himself, its duration had been five years. There was very marked hypertrophy of the feet and hands, the nails were flattened, longitudinally striated and cracked, the face exhibited considerable enlargement of the lower jaw, with thickening of the cartilages of the nose and of the outer edge of the orbits, the lower lip, tongue, and tonsils were hypertrophied, and several teeth had fallen out. The pelvic bones were enlarged, there was an increase of the dorsal and lumbar curves of the spine, and the ribs were thickened. The thyroid gland was not to be felt, and appeared atrophied. There was some high-pitched resonance over the manubrium sterni. On the back was a pedunculated molluscum fibrosum, such as had been noticed in previous cases. The man suffered from headache

and profuse sweats. Sight was failing, owing possibly to the presence of choriditis, which had been observed. The thigh and leg on the side affected by sciatica were wasted. There was no great increase of appetite and no loss of taste, such as had been described. An unusual feature in the case was an extension of the enlargement to the forearms.—Mr. TAYLOR inquired as to the affection of the fields of vision in relation to the possible presence of an enlarged pituitary body pressing on the optic tract.—Mr. MARMADUKE SHEILD asked for information relative to the mode of enlargement of bones.—In reply, Dr. PHILLIPS said there was no limitation of fields, and that he was unaware that any minute examination had been made of the bones in these cases. There was thickening, but no elongation.

Mr. PEARCE GOULD exhibited a case in which he had operated for Old Unreduced Dislocation of the Shoulder. There had been paralysis and some wasting, with great pain in the limb, from pressure on the nerves. An attempt at reduction under chloroform having proved unsuccessful, on April 5th, 1890, he had made an incision as for excision of the head of the humerus, and, having divided all the muscles in connexion with the great tuberosity, managed to replace the bone. Although the humerus had been dislocated two months, there was now practically as good movement as in the healthy limb. Many of the paralysed and wasted muscles had recovered, and there only remained some defect in those supplied by the ulnar nerve, which had been most profoundly injured.

Mr. WATSON CHEYNE showed a second case of the same sort, but in which four months had elapsed between the dislocation of the bone and its restoration, the man, in addition, having failed to attend the hospital subsequently. In consequence of this and of having had to divide all the muscles with the exception of part of the pectoralis major, as well as to clear out the glenoid cavity, range and power of movement were somewhat defective, and the head of the bone had slipped slightly forward.—The VICE-PRESIDENT referred to the history of these cases, and the improvement introduced by this method of treatment.—Mr. MARMADUKE SHEILD, referring to his own paper at the Medico-Chirurgical Society, deprecated the application of great force in attempts at reduction. Excision, he thought, was easier and preferable in cases of long standing. The results were very satisfactory. Where there was fair movement and no trouble from pressure on nerves it was better not to interfere.—Dr. SOLOMON SMITH inquired as to the cause of difficulty in replacement after the muscles were divided freely, and whether in the second case there was any chipping of the glenoid rim to account for the bone subsequently falling forward.—Mr. PEARCE GOULD referred the difficulty in reduction to the great shortening and tension of muscles, fasciæ, and ligaments. He advised that when replacement was called for one good effort should be made under chloroform, and if this failed, operation should be proceeded with. He agreed entirely with the remarks of Mr. Sheild. — Mr. WATSON CHEYNE referred to the danger, in using force, of rupturing the axillary artery. He had observed no chipping of the glenoid fossa during his operation.

Dr. LESLIE OGILVIE showed two cases of Floating Spleen, occurring in two boys in the same family. Both had suffered from rickets. The elder one was able to depress and protrude the organ, as a tumour, by voluntary effort.—Sir HUGH BEEVOR mentioned a case previously shown, where there was great laxity of the abdominal wall on both sides.

Dr. JAMES TAYLOR demonstrated a case of Friedreich's Ataxy in a boy. There were choreic tremors, marked ataxy, nystagmus, and cramps in the legs. There was some degree of lateral curvature, thermal impressions were delayed, and knee-jerks were lost. The disorder had come on six months after recovery from diphtheritic paralysis. An elder brother was rather worse, the third, a girl, being unaffected. The boy exhibited the "humped foot" (talipes equino-varus) usually met with in this disease. Replying to Mr. Clutton and Dr. Ormerod, he could not say when the foot deformity occurred. There was no history of alcohol, syphilis, or neurosis.

HARVEIAN SOCIETY OF LONDON.

A MEETING of this Society was held on Feb. 4th, Dr. W. B. Cheadle, President, F.R.C.P., in the chair.

Senile Tuberculosis.—Mr. HOWARD MARSH read a paper on Senile Tuberculosis, a title which, in view of recent advances of pathology, he had ventured to substitute for that of Senile Scrofula, originally used by Sir James Paget. He thought all cases occurring in patients over fifty should be regarded as senile. This limit as to age was an arbitrary one, but it was clinically sound. The case was related of a man of sixty-three, who had tubercular disease of his knee, going on to suppuration, and who had somewhat advanced phthisis of both lungs. Amputation was performed, and rapid healing of the wound was followed by marked improvement of the general health. A tubercular knee-joint was also shown from a lady of sixty-seven, in whom Mr. Thomas Smith had performed amputation, and who made a very favourable recovery. Particulars of four cases of senile tuberculosis of the hip-joint were given, in two of which the patients had phthisis; while a third, a patient under the care of Mr. Langton, died of general tuberculosis attended with symptoms of tubercular meningitis. The author described four cases of caries of the spine in the old—one of them having been under Mr. Butlin,—two cases of tuberculosis of the wrist, and two of the testis. In the great majority of the cases related suppuration had occurred. Mr. Marsh discussed the diagnosis (which was often very obscure in the early stage) between senile tuberculosis and osteo-arthritis, and between the former and malignant disease in cases in which the lymphatic glands were the parts affected. Senile tuberculosis showed, he remarked, a strong tendency to suppuration, and was often inveterate. In some cases, however, sound repair had occurred. Treatment must, as in younger subjects, aim at improvement of the general health; local rest must be secured, and matter must be evacuated, aseptically, as soon as it was detected. In many instances, amputation became necessary, and in the majority of cases this was well borne; the wound healed favourably, and often very quickly.—The PRESIDENT remarked upon the similarity between tuberculosis of the young and of the aged.—Mr. D'ARCY POWER thought that in the aged the tendency was to necrosis rather than caries.—Dr. WILLIAM HILL referred to cases of senile tuberculosis of the larynx.—Dr. Drew, Mr. Cripps Lawrence, Dr. Winslow Hall, and Dr. Sutherland also spoke.—Mr. HOWARD MARSH briefly replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, JAN. 20TH.

Mr. ANDERSON, F.R.C.S., President, in the chair.

Chorea.—Dr. HANDFORD showed a case of general chorea in a woman aged sixty-three, following left hemiplegia, but presenting the characteristics of senile chorea rather than of post hemiplegic chorea, inasmuch as the movements affected equally the face and both upper extremities, and to a much slighter extent both lower extremities. The prognosis as to cure was not very favourable. Dr. Handford also showed a man aged fifty in whom progressive muscular atrophy, with marked symptoms of bulbar paralysis, had followed an attack of left hemiplegia three months previously. The hemiplegic paralysis had been almost completely recovered from, but the bulbar disease had caused complete aphasia, with difficulty of swallowing and attacks of dyspnœa.

Nasal Cavities and their Diseases.—Dr. STEWART read a paper on this subject. He discussed the diagnosis in cases of suppuration of one or other of the accessory cavities in relation with the nose, and commented on the rarity of disease in the frontal and sphenoidal cells. The most important function of the nose was considered to be that of allowing free passage of air in respiration; hence the importance of removing spurs on the septum, polypi, hypertrophies, and post-nasal adenoma. Where suppuration existed along with polypi the last should be first removed. In chronic pharyngitis and laryngitis it was important to examine the nose, as a cause of the disease might often be found there.

Nasal Hydrorrhœa.—The PRESIDENT related the case of a young woman aged nineteen who had for some time been troubled with a perfectly clear, watery discharge from the left nostril. The discharge was almost continuous, but could be increased by inclination of the head to the opposite side, and after a quantity had flowed forth in this way it would for a time cease. There was no symptom or sign of disease in either the ethmoidal, frontal, or sphenoidal

sinuses, and no tumefaction of the cheek or other sign of distension of the antrum. Nothing could be discovered in the anterior or posterior nares. From the symptoms it appeared evident that the antrum furnished the discharge. The molar teeth on the affected side were carious, and the cavity was opened by extracting the second and perforating the bone, when a quantity of clear fluid similar to that discharged from the nose was evacuated. The cavity was drained into the mouth, and douched daily with an astringent wash. This did not effect a cure, so the opening in the bone was enlarged to a sufficient extent to admit the end of the little finger, when a number of minute polypi were found projecting from the mucous lining of the antrum. The interior was scraped with a director and swabbed out with a solution of chloride of zinc, which effected a cure in about six weeks. When last seen, some months after, the patient was quite well, and had no recurrence of the symptoms. Allusion was made to a case very similar to the above in many respects which had been reported by Sir James Paget to the Clinical Society in 1879.

Specimens.—Dr. HANDFORD showed Transverse and Longitudinal Sections of Hardened Brains affected by Tumours, also photographs illustrating Ocular Paralysis and Cerebral Tumours. Mr. CLEMONS, for Dr. Handford: Microscopic Section of Sarcoma of Brain.

Reviews and Notices of Books.

Text book of the Eruptive and Continued Fevers. By JOHN WILLIAM MOORE, B.A., M.D., M.Ch. Univ. Dub., Fellow and Registrar of the Royal College of Physicians of Ireland; Physician to the Meath Hospital, Dublin; Joint Professor of the Practice of Medicine in the Schools of Surgery of the Royal College of Surgeons in Ireland; Consulting Physician to the Cork Fever Hospital, Dublin, &c. Dublin: Fannin and Co. 1892.

THE author of this text-book in his preface briefly alludes to the circumstances under which it has been published. He modestly disclaims all intention of competing, as it were, with such a work as Murchison's monograph on the Continued Fevers, the last edition of which was edited with so much ability by Dr. William Cayley. As regards the eruptive fevers, however, he points out that we possess no work at all analogous to, or comparable with, that of Murchison on the Continued Fevers, notwithstanding that a full and accurate description of these diseases is to be found in the third edition of Hilton Fagge's and Pye-Smith's Text-book of the Principles and Practice of Medicine, and in other standard works. It has been the author's endeavour, he tells us, to gather into a focus the most recent views on the etiology, bacteriology, symptoms, pathology, and treatment of this eruptive fever group of diseases. Dr. Moore alludes to the honourable position which the Irish universities, licensing bodies, and schools have occupied in recognising the great practical importance of a knowledge of this subject, and in insisting upon evidence being furnished by medical candidates of a personal clinical study of fever.

In opening a new medical text-book we naturally ask ourselves not only whether its author has anything to say and knows how to say it, but whether he possesses the requisite knowledge and experience to qualify him for the work. As regards Dr. Moore's qualifications in the latter respect, we may remark that he adverts to the advantages he gained from the teaching of Stokes and Hudson, and to the fact that for thirteen years he was one of the physicians in the Cork-street Fever Hospital, Dublin.

Part I. forms the introduction, in which such subjects are considered as the intimate nature of fever, the intimate nature of contagion, micro-parasitic diseases, and the general principles of treatment of the eruptive and continued fevers under the heads of "Preventive Treatment or Prophylaxis" and "Curative Treatment." These subjects occupy five chapters. Part II. deals with the exanthemata or eruptive fevers in eighteen chapters; and Part III. with the continued fevers, to which twenty-six chapters are devoted. In the chapters forming the introductory part of the book the reader is first of all furnished with a carefully written *précis* of the latest theories of animal heat, of investigations into the nature and causes of pyrexia, the pathology of the infective or specific fevers, and an explanation is given of the essential phenomena of fever. In regard to the thirst of fever, we are glad to notice that Dr. Moore dwells strongly upon a practical point, which, however obvious, is occasionally neglected—viz., the great importance and value of cold water as a beverage. The first chapter closes with some sensible remarks on how water may be supplied to the fever patient, the importance of cold water as a beverage in washing out the retained products of tissue change, and the absence of risk to the patient of frequent ablutions necessary for the maintenance of personal cleanliness. Chapters 2 and 3 deal with the intimate nature of contagion and the germ theory of disease and micro-parasitic diseases. The author summarises the latest views of various authorities on these subjects, including Metchnikoff's theory of phagocytosis and its results, gives a classification of micro-parasitic febrile diseases, exclusive of septicæmia, with observations on the behaviour of the temperature and the cyclical course of specific fevers, and adds a useful table embodying information as to the periods of incubation, invasion, eruption, mode of defervescence, duration of fever, form of desquamation, time of quarantine and isolation for the group of eruptive fevers and continued fevers respectively. In Chapter 4, under the head of "Preventive Treatment," we have some general remarks on disinfection and disinfectants, the general plan of disinfection laid down by Dr. Emerson Reynolds, F.R.S., Professor of Chemistry in the University of Dublin, with that observer's latest investigations on a new and powerful disinfectant named thiocamf. Then follows a brief account of the official regulations for disinfection adopted in Berlin, and reference to a paper read in the Section of Bacteriology at the late International Congress of Hygiene and Demography in London by Stabsarzt Dr. Behring of Berlin, together with information relating to hygiene, recent legislative sanitary enactments, and public health provisions generally. Under the head of "Curative Treatment" the author has a practical chapter in which he deals with the general principles of treatment of fevers, and passes in review the various agents that have been used or recommended for the purpose.

After a brief preliminary chapter of general nature, Dr. Moore next proceeds to a consideration of the various exanthemata, and begins with small-pox. Diagrams, copied from the annual summary of births and deaths of the Registrar-General for England, are inserted throughout the volume in regard to this and other fevers, to show the weekly departure from the average weekly number of deaths. The bacteriology of small-pox is still incomplete. A long experience in the wards of the Cork street Fever Hospital, Dublin, has led him to the conclusion that a purpuric or hæmorrhagic tendency early in small-pox postpones—it may be indefinitely—the appearance of the true variolous eruption. It is sometimes difficult to differentiate between a case of this grave variety of the disease and one of purpuric fever or epidemic cerebro-spinal meningitis.

We may here say that the text-book is well illustrated with charts of the temperature ranges of small-pox and of the other fevers, eruptive and continued, and that, with three exceptions, they have been reproduced from charts taken

from the author's hospital practice. The influence of vaccination is carefully considered and set forth in tabular form. The use of the warm-bath treatment in bad small-pox is dwelt upon and illustrated by the graphic description of a case. Chicken-pox, measles, scarlatina, rötheln, and erysipelas follow the chapters on small-pox. In the description of these diseases, and, indeed, throughout his book, the author has of course drawn largely from different well-known authorities. It could not be otherwise in the case of a text-book which is necessarily in great part a compilation; but Dr. Moore expresses his own opinion, relies on the results of his own experience, and introduces comments and criticisms derived from his own observations and reasoning wherever necessary. The latest and soundest information is afforded in regard to the etiology, pathology, clinical history, and treatment of this group of diseases.

Part III. is the concluding portion of the work, and deals with the continued fevers. The order in which these are taken is simple fever, typhus fever, relapsing fever, and typhoid or enteric fever. Our knowledge of the exact nature, causes, and varieties of simple continued fever has not advanced much, and there is, speaking generally, a lack of precision in regard to it. The chapters on typhus fever embody a large amount of information drawn from the best available sources. We cannot yet be said to have acquired any definite knowledge of the bacteriology of typhus fever. Dr. Cayley expresses a general conviction when he says that, judging from analogy with relapsing fever and other contagious diseases, it seems probable that typhus fever is due to a specific microbe which requires conditions of overcrowding and imperfect ventilation to develop its virulent and contagious properties. We have no doubt ascertained a number of interesting and important facts respecting the typhus poison. It is, as everyone knows, an eminently infectious disease, and the contagium may remain latent for long periods. Alluding to Haller's observation that the contagium of typhus fever is lighter than atmospheric air, and that the disease has spread to the upper storeys of a hospital when it was treated on the ground floor, whereas the patients in the lower storeys enjoyed perfect immunity when the typhus fever patients were treated above, the author cites the practice adopted at the Meath Hospital a quarter of a century ago in evidence of the correctness of this observation. Relapsing, famine, or spirillum fever is next considered, and the historical sketch, bacteriology, clinical description, pathology, and treatment of the disease are briefly but well set forth. Dr. Moore states that he has never seen a case of the disease in his hospital or private practice, and he consequently disputes the accuracy of Hirsch's unqualified statement, to the effect that the disease is endemic in Ireland. The concluding part of the volume, with the exception of a short final chapter on infection and immunity, is taken up with a comprehensive consideration of enteric or typhoid fever. The bacteriology is fully considered, the investigations of Gaffky, Eberth, Koch, Klein, and a number of other authorities being referred to. Dr. Moore says that his opinions have necessarily been modified by the discovery of Eberth's bacillus typhosus. He now holds the doctrine that enteric fever arises only when the specific microbe enters the body, and especially the intestinal canal, of a susceptible individual. He traces out the probable way in which enteric fever arises in connexion with the discharge of these micro-organisms, as resting spores, into faulty drains or into the ground, there to await suitable temperature and nourishment until they gain entrance into a susceptible body, develop into bacilli, and begin anew their cycle of existence as pathogenic microbes. The various paths of infection are then traced out. He has some interesting remarks on the close correlation that exists between enteric fever and that variety of pneumonic fever to which the term pythogenic pneumonia has been applied. The results of our own experience are corroborative of this. We think that the period of incubation of enteric fever is often prolonged beyond two weeks. The author mentions that of late years the insidious onset of enteric fever has given place to a more abrupt and vehement advance and rapid rise of temperature—at least that has been his experience in Dublin. Attention is directed, in connexion with the nervous system, to Dr. Angel Money's paper on reflex actions, knee-jerks, and muscular irritability in typhoid fever, phthisis, and other continuous fevers, which appeared in THE LANCET of Nov. 7th, 1885. Relapse in enteric fever is fully considered, and illustrative instances are given. A relapse may occur, by the way, after longer intervals than commonly laid down. The author agrees with Dr. Hilton Fagge that there are rare instances of typhoid fever in which the intestinal glands are not affected, and alludes to cases recorded by Dr. Sidney Phillips, himself, and others. The question of laparotomy is fully considered in connexion with perforation in enteric fever. We think that Dr. Cayley, in his article on Typhoid Fever in Dr. Kingston Fowler's Dictionary of Practical Medicine, has put this subject shortly and well.

In a book containing so much and such a variety of information it is embarrassing to know what to select for notice, and we need scarcely add that there are a number of subjects which we should gladly have touched upon, but our space is already exhausted. This text-book of the eruptive and continued fevers is, in our opinion, a learned and able work. A reference to the index of names will show the large number of authorities which its author has consulted and quoted, and be sufficient evidence of the laborious nature of his undertaking. The work is clearly written, and has merits which will commend it to the profession.

OUR LIBRARY TABLE.

The Royal London Ophthalmic Hospital Reports. Edited by R. MARCUS GUNN, F.R.C.S. Vol. XIII., Part II., December, 1891. London: J. & A. Churchill.—This part bristles with statistics. Messrs. Lawford and Treacher Collins supply notes of 103 cases of sarcoma of the uveal tract. These notes include a large number of published cases, but much trouble has been taken in obtaining information in regard to the subsequent history of the patients, a point often neglected in the original account. Such collections of cases are very useful, and many general conclusions can be drawn from them. Sarcoma of the uveal tract appears to occur with about equal frequency in the two sexes and in the two eyes, males being rather more commonly affected than females, and the left eye more than the right. Of the total number of cases, the after history of seventy-nine has been traced. In twenty cases three or more years have elapsed since the removal of the primary growth, and the patients are still alive. The removal of the growth at as early a period as possible is clearly imperative, as the disease is a progressive one. Mr. T. Holmes Spicer gives an analysis of 158 cases of acute purulent ophthalmia, excluding as a rule those of ophthalmia neonatorum. The great majority of the cases resulted from gonorrhœal infection. The two sexes were equally affected. The results were always worst in patients over thirty years of age. The treatment applied was very various. The importance of Buller's shield and early treatment is strongly dwelt upon. Mr. Nettleship gives some interesting cases of temporary blindness during lactation, and Mr. Treacher Collins supplies two papers—one on the Operative Treatment of Glaucoma, and the other on a case of Tumour in each Orbit.

The former is highly instructive, giving an account of the appearances presented at the point where the incision for the iridectomy or sclerotomy had been performed. The paper is illustrated by many coloured cuts, which are reproductions of photo-micrographs, a very creditable piece of work.

The Frog: an Introduction to Anatomy, Histology, and Embryology. By A. MILNES MARSHALL, D.Sc., Professor in the Victoria University. Fourth Edition. Pp. 163. London: Smith, Elder, and Co. Manchester: Cornish. 1891.—This work is divided into nine chapters, each dealing either with one of the systems of the animal, as the nervous, circulatory, muscular, and osseous, or with its histology or development. An introductory section deals with the Processes and Methods in Common Use in Biological Inquiry. There are many illustrations. The dissections are accurate, and the descriptions are given in short paragraphs that are both intelligible and easy to be followed by the student. The careful dissection of one such animal as the frog should be done by every medical student, and would form an excellent introduction to the study of human anatomy.

On the Ambulance Organisation and Medical Arrangements of an English Army Corps in the Field. Together with a Description and Plan of "Bearer Company" Practice as carried out at Netley. By Surgeon-Captain C. J. ADDISON, Army Medical Staff. Netley: J. T. Lemon.—This little book is well described by its title. It is just what it pretends to be, and is written clearly and to the point. Its author is the instructor at Netley in matters of drill to the surgeons on probation, and his method of dealing with the subject is based upon experience. A good deal of information of a precise and useful kind is compressed into a small compass, and the method pursued is plainly and concisely put, and likely to be a great aid to members of the Militia and Volunteer Medical Staff Corps in their various ambulance drills. A short sketch is afforded of the objects, origin, and development of the organisation; and the conditions under which the severely wounded soldier is found after having been struck down in the fighting line are enumerated and practically considered. The plan of "bearer company" practice and of the formation of dressing and collecting stations as carried out at Netley, with the detailed description, make the system quite plain.

The Strange History of a Dynamo. By T. E. GATEHOUSE. London: H. Alabaster, Gatehouse, and Co.—The objects the author of this *brochure* had in view were: first, to attempt to give in plain language a popular exposition of the dynamo-electric machine, which could be readily understood by the non-technical reader; and secondly, to bring more prominently into publicity the most noteworthy achievements of a devotee of science. The story is told by a dynamo, which is supposed to relate the history of its evolution. Those who wish to know all about the dynamo from its birth and "up to date" will do well to read this interesting and well-written account.

Wilson's Legal Handy Books: the Law of Bankruptcy. By C. E. STEWART, M.A., Barrister-at-Law. London: Effingham Wilson and Co.—This series of little books on legal subjects is well-known, and has no doubt proved to be of great utility to a large circle of readers. The present deals with a large subject, and will fully sustain the reputation of the series. Bristling with technicalities, the topic is not susceptible of simple, barely indeed of intelligible, treatment, and we will not pretend, therefore, that Mr. Stewart has succeeded in producing an attractive book. But technical handbooks are seldom attractive, and on the more appropriate ground of usefulness this latest addition to Mr. Wilson's library of publications need occasion him no misgivings.

New Inventions.

A NEW STETHOSCOPE.

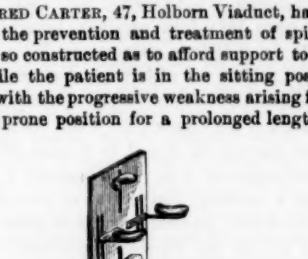
IT was not until I was conversing upon the varieties of stethoscopes with Dr. B. W. Richardson the other day that I realised the value and convenience of one made for me by Messrs. Maw, Son, and Thompson some years since, and which I always use. It is composed of two pieces of india-rubber tubing each two feet two inches long, with vulcanite ear-pieces at the upper ends, and tubes for insertion in the oval chest-piece at the lower extremity, also made of

vulcanite. The chest-piece is seven-eighths of an inch in length and five-eighths of an inch in width, and cupped inside. The instrument can be carried in the waistcoat pocket or most conveniently in a pistol pocket made in the trousers. It is the most sensitive stethoscope of its kind. The tubes are inserted separately into the chest-piece, not terminating together, as in Dr. B. W. Richardson's original pattern. It differs from Stearne's stethoscope by the chest-piece being much smaller, and oval instead of round, allowing it to be applied to the intercostal spaces, frequently detecting mischief not recognisable by means of the ordinary instrument. There is no occasion to lean over the patient under examination or to inhale the patient's breath. The instrument is manufactured by Messrs. John Richardson and Co., Leicester.

JOHN R. PHILPOTS, L.R.C.P. & S. Edin., J.P.
Parkstone, Dorsetshire.

CHAIR FOR SPINAL CURVATURE.

MR. ALFRED CARTER, 47, Holborn Viaduct, has invented a chair for the prevention and treatment of spinal curvature. It is so constructed as to afford support to the spinal column while the patient is in the sitting posture, thus dispensing with the progressive weakness arising from maintaining the prone position for a prolonged length of time.



The illustration given shows the manner of adjusting the crutches to the axillæ and of fixing the pillows in the position required by the patient. The legs can also be supported at any angle, and the whole apparatus can be brought to a horizontal plane and used as a reclining board.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 27, 1892.

UNDER the title "The New University for London," Prof. KARL PEARSON, M.A., of University College, has published a small volume dealing with the history and the defects of the scheme. The history is past, and therefore the larger part of the volume is only of interest to those who have followed the various phases of the movement for the foundation of a "Teaching University" in London from its commencement to its present standpoint. The historical part of the work is simply a reproduction of the letters of Professor KARL PEARSON and other controversialists to the *Academy* and other papers. Some twenty pages deal with the present aspect of the question. Professor KARL PEARSON has come to the conclusion that all that is reasonable in the opposition to the Charter is, that Parliament ought to be induced not to express unqualified disapproval of the Charter, but to petition against its being granted until it is modified by provisions: "(1) For the removal of the religious test; (2) for the ultimate appointment of all teachers by the University itself; (3) for the granting of M.D. degrees only to such persons as shall have gone through the full medical curriculum of the University itself after its establishment; (4) for wider powers of extra-collegiate lecturing." This is the most important assault from the academic side on the proposal to grant the Charter of the new University. There is only one chapter written since the union of the Gresham College with the promoters of the new University has been officially announced, and this chapter is but historical in relation to the past history and suggestive as to the future development of the Gresham College. The various phases of the question from a medical point of view have since 1884 been regularly brought before our readers. It is therefore unnecessary for us to again discuss those points; we will simply deal with the objections which seem to Professor PEARSON sufficient to suggest the emendation of the Charter, but which are not enough in his view to warrant an appeal to Parliament to express unqualified disapproval of it. It is doubtful if Parliament can express a modified disapproval of the scheme. So far as we understand, the Charter must be passed or rejected *en bloc*, and we ask the dissentient professors in Arts and Science at University College to seriously consider whether, if the scheme for the formation of the Gresham University fails, any other and what possible alternative is likely to be carried in the present generation. We will now deal *seriatim* with the provisions set forth by Professor PEARSON.

1. The writer of the article in the *Quarterly Review* for January, 1892, who is by no means friendly to a new University, disposes of the question of the religious test in King's College, as a part of the new University, in the following words: "There is, in fact, no incongruity between a sectarian college and an unsectarian university, or any good reason why the one should not comprise the other as one of its component parts."

2. This means the absorption of the governing bodies of the two Teaching Colleges and the ten medical schools into the Senate of the University. To whom, then, shall be given the power to appoint professors? If the two Teaching Colleges alone were to form a new University this suggestion might be possible, although we do not believe it would ever be carried out; but the inclusion of the medical schools (and a University in London which does not include them is impossible) will obviously render Professor PEARSON'S provision impracticable. The working arrangement favoured by the author in regard to the medical difficulty is that suggested by Professor LANKESTER—viz., the complete divorce of the clinical teaching at the Colleges from the science teaching, the science teaching at the various medical schools to be entrusted to University readers, "who might continue to be, as they now largely are, peripatetic." It is on such impossible lines that an ideal University—that is to say, on the Scotch or German system—should, according to Professor PEARSON, be founded. Anyone familiar with medical education in London will at once see that such an ideal could never be realised. Existing institutions must be federated, and then doubtless a considerable concentration of teaching power will follow. New University lecturers may be appointed under the Gresham Charter, and these will necessarily deal with advanced and special subjects, so as not to clash with the ordinary teaching. Theoretically, undoubtedly, the appointment of professors should be in the hands of the Council, but practically, in the existing circumstances of London, this cannot be done. As the Bishop of London says in his letter published in *The Times* of Wednesday, "A paper constitution is easy to make, and it may be made to fit any theory that you like; it may satisfy ideal conditions; it may be deduced from high philosophical principles; but it almost invariably fails."

3. With regard to medical degrees, we would call Professor PEARSON'S attention to Sir GEORGE YOUNG'S letter in our last issue, in which he disclaims having ever suggested a lowering of the education in Arts and Science, and also to the statement of the delegates of the medical schools of London (p. 495), in which such an intention is expressly repudiated. Even the diplomates of the London medical schools, whilst anxious to have their past curriculum taken into consideration, deprecate in their petition "any modification of the nature or extent of the examinations for the new degree in their especial favour," and it was only to this body that Mr. ERICHSEN'S oft-quoted letter referred, in which he expressly states that his opinion of a clinical examination only was quite unofficial.

4. Extra-collegiate work is specially mentioned in the Charter; but the claim that attendance on "extension" lectures is to entitle a student to graduate is surely extravagant. The aim of collegiate training is to secure a continuous course of study, and this is absolutely impossible under the system of the University Extension Lectures. No certificate of continuous study has yet been gained by any student attending them. They are intended for the masses, and must be more or less popular, and such as

require no special preliminary training in those who attend them. We will not reproduce Professor PEARSON'S severe strictures on the graduates of the University of London who are petitioning against the Charter for a Teaching University, but will conclude by saying that his ideal is impracticable in London, and that we fear he is only doing mischief by so strenuously pursuing it and refusing to improve the means at his disposal. His attitude towards the medical aspect of the problem is obviously due to his imperfect appreciation of the magnitude of the problem to be solved and to his ignoring of the possibility of its solution which the Charter of the Gresham University affords. His idea of a medical man's duties and qualifications may be gathered from the following quotation: "Personally regarding ÆSCULAPIUS as a man whose chief function is to cheer us up by bright conversation when in a depressed state of mind, we should prefer to call in an M.D. Cantab., that he might talk 'auld lang syne.'"

THE need for regulating the height of rooms intended for human habitation has long been recognised, and a large number of sanitary authorities have made by-laws on the subject for many years past. But after the issue by the Local Government Board of their Model By-laws in 1877, sanitary authorities desirous of amending their existing codes as to new buildings were refused a by-law on this special question. It was strongly contended by some of them that sanction to such a provision was justified on the ground that it had to do with the ventilation of rooms, and as such was authorised by that portion of Section 157 of the Public Health Act, 1875, which gave to urban sanitary authorities the power to make by-laws "with respect to the ventilation of buildings." The sanitary value of such a regulation was fully admitted, and with the intention of disposing of the doubts entertained as to its legality the opinion of the law officers of the Crown was sought on the point. That opinion, which was signed by Sir HENRY JAMES and Sir FARRER (now Lord) HERSCHELL, was to the effect "that an urban sanitary authority has no general power, under the 157th section of the Public Health Act, 1875, to make by-laws regulating the height of rooms for the purpose of thereby securing improved ventilation. There may, however, be cases where reasonable regulations made with reference to the mode of ventilation would necessitate the rooms being of a certain height." The indirect method of attaining the end in view which the law officers suggested was evidently not found to be a practicable way out of the difficulty, for the result was that no power to regulate the height of habitable rooms has ever been granted under the general statute law.

The defect was fortunately remedied in the Public Health Amendment Act, 1890, Section 23 of which gives the power to make by-laws with respect, amongst other matters, to "the height of rooms intended to be used for human habitation." And the Local Government Board, having apparently found reason to educate sanitary authorities as to what should be regarded as constituting a reasonable height for the purposes of health, have issued a Memorandum on the subject, which has been drawn up by their medical officer, Dr. BUCHANAN, and their architect, Mr. P. GORDON SMITH.

After explaining that, for obvious reasons, the minimum permissible height alone needs regulation, the Memorandum points out that under customary conditions low-pitched rooms are comparatively more difficult to keep fresh—that is, to ventilate—than rooms of a greater height, and that it is essentially in sleeping rooms that the determination of an adequate height is most important, more especially because the occupants are not able during sleep to vary the conditions of air movement through the room. The height of a sleeping room obviously needs to bear some relation to its floor space—that is to say, it should be determined with some reference to the number of beds that can conveniently be placed within it. Whether the number of persons occupying the beds shall have enough breathing space to keep them in health or not is the real question, and this must depend in an important degree upon the height of the room. In numberless cases the builders and the occupants too have regard only to floor area, and when this is excessive in relation to height, the natural tendency is to pack too many people in the breathing space available, and, whilst inconvenience on the floor level itself is avoided, overcrowding really results. But overcrowding of this sort is difficult to deal with as a statutory nuisance, and hence it needs to be prevented by having a reasonable standard minimum height of rooms. Having in view these and other considerations, including a proper regard to economy, the Local Government Board advise sanitary authorities to require a minimum height of nine feet for all rooms to be used for human habitation in which the ceiling is throughout parallel with the floor. And, having given this advice, they make it clear that if this standard is locally deemed to be excessive any reduction that will receive their sanction will not extend to any smaller height than eight feet over the total area of the room.

Such a minimum standard can hardly be regarded as excessive in the case of ordinary rooms. Indeed, such difficulty as arises in this matter is generally limited to rooms which are constructed either partly or wholly within the roof, and which are commonly called "attic rooms." When this class of room is considered it will at once strike an intelligent person that a standard which is deemed requisite in order to secure adequate breathing space on a first or second floor must be equally wanted on a third floor, even if the third floor room be an attic. As a matter of fact it is often more requisite in the attic floor than elsewhere, for servants and others, whose health requirements in this respect are as a rule less thought of than those of any other inmates of the house, are the persons generally relegated to the attic. The minimum of eight feet must therefore be upheld in principle; but, according to the Memorandum, the Local Government Board have evidently been advised to make a reasonable concession to local opinion and to custom by announcing that, as regards attic rooms, they will be prepared to give their sanction to a by-law which shall give a *mean height* of not less than eight feet for the entire room. But to those who are acquainted with sanitary inspection and its results it is well known that one of the greatest evils which has

to be contended with in the worst class of houses in some districts is the tendency to crowd the floor area in attics by placing either low beds or mattresses in the angle formed by the floor and the sloping roof. This mischievous practice will have to be met in any by-law on this subject, and it is announced in advance that the central authority will require a minimum height of five feet in attics in addition to the mean height of eight feet. This minimum of five feet also operates usefully in the direction of limiting the amount of floor area that can be occupied by beds, and it indirectly facilitates the attainment of the mean of eight feet.

One very helpful part of this useful Memorandum consists in a series of diagrams showing, in the case of houses having roofs of various constructions, how the minimum of five feet and the mean of eight feet can conveniently be obtained. In one of the attics a horizontal ceiling nine feet in height has to be provided over one-half of the floor area; in a second the horizontal part of the ceiling is shown to be eight feet nine inches high over three-fifths of the floor area; and in a third instance the ceiling is eight feet four inches high over five-sixths of the floor area. Other methods of attaining the same end will doubtless present themselves to the minds of architects and others concerned in the construction of dwelling-houses; but it is to be hoped that, in the interests of public health, no attempts will be made to diminish the minimum standards laid down in the Memorandum, but that, on the contrary, the advice of the officers of the Local Government Board will be taken in adopting as a general rule a minimum height of nine feet as regards all ordinary rooms intended to be used for human habitation.

IN the January number of the *Archives de Physiologie* of Dr. BROWN-SÉQUARD, M. E. GLEY gives an account of experiments made by him to determine the effects of the ablation of the thyroid gland in the dog. Hitherto all who have performed this operation on the dog, cat, and ape have found that the result was almost invariably fatal, and in the few cases where it is reported that life has been preserved M. GLEY considers that the successful issue has been due to the presence of accessory thyroid glands which have acted vicariously, and that when the animals have survived for a considerable time death has been really due to the operation, although the connexion with it has been overlooked. In M. GLEY'S operations, which were all performed under strict antiseptic precautions, primary union of the wound was of general occurrence, though occasionally death supervened too rapidly for union to be effected. The first series of symptoms to which he draws attention, and to which he thinks sufficient attention has not been directed, are those indicating disturbance of the functions of the medulla oblongata, or, as he terms them, "bulbar accidents." These may be observed at a very early period, and consist of vomiting and dysphagia. The efforts to vomit, accompanied by salivation, often precede an attack of convulsions, and last till the animal dies, the matters vomited being bile and mucus. Prof. SCHIFF long ago noticed anorexia as an occasional effect of the operation, having observed it three times in sixty cases. M. GLEY finds that it is less rare than Prof. SCHIFF states, for he finds that nearly all the dogs were indisposed to take food, and that when the refusal was absolute it was a sure sign of a rapidly fatal result. But even when the animal preserves its appetite it experiences great difficulty in taking sufficient nourishment, owing to the incessant spasmodic contractions of the masseter and fibrillar contractions of the muscles of the tongue. Moreover, the dysphagia usually present renders it as difficult for it to swallow liquids as solids; and if perchance some food does gain entrance into the stomach, it is immediately rejected, with an increase of the convulsive movements, the animals ceasing to make any attempt to take food. Vomiting occurs even when food is carefully introduced into the stomach by means of the œsophageal tube. In some instances the animal continues to eat, but the food accumulates in the stomach, the abdomen becomes swollen, and the large intestine fails to discharge its contents. The fæcal evacuations occasionally contain blood. In some instances trophic disturbances appear in the form of excoriations, especially affecting the region of the articulations in the fore and hind limbs. These ulcers sometimes suppurate, and never present the slightest disposition to heal. M. GLEY, like most of the previous observers, has seen muscular paresis and partial paralyses occur usually amongst the earlier symptoms, the extensors in particular being affected; the staggering gait, which is so remarkable in the animals affected, is thus caused. On the other hand, spasms are also of frequent occurrence, which in the first instance affect the masseter and temporal muscles, but soon spread to the muscles of the body generally, and seem to be the result of discharges taking place at tolerably regular intervals. This state lasts for two or three days, when a violent general convulsion may occur, with a tendency to tetanus. At this period the acts of respiration are greatly accelerated, in some cases numbering as many as 220 in the minute, and death often supervenes in one of these convulsions. M. GLEY gives some novel and interesting tracings both of the fibrillar tremblings and of the more violent spasms. Coincidentally with the increased frequency of the respiration the temperature rises, 42°, 43°, and even 43·6° C. (110·4° F.) having been noted within three hours of the operation. In the intervals of the convulsive attacks the temperature has been observed by Dr. UGHETTI to fall as low as 4° C. below the normal, and M. GLEY'S observations generally coincide with those of Dr. UGHETTI, though he has not noticed any case in which the fall was quite so great as this. He thinks these effects are attributable to some direct action exerted on the nervous system. Both in the dog and in the rabbit the urine frequently becomes albuminous. Amongst the pathological phenomena that he has observed may be mentioned various local congestions, especially of the cortical substance of the brain and of the cerebellum, of the liver, kidney, and spleen, whilst the mucous membrane of the stomach often presents hæmorrhagic spots. Death may occur any time between the second and the eleventh day. In one case the animal lived for six months after the operation without apparent ailment, and in another the animal is still alive, but has distaste for food and staggering gait. Although these experiments do not afford any clue to the function of

the thyroid gland, it must be admitted that they demonstrate the remarkable influence that the removal of the organ exercises on the nervo-muscular apparatus.

THE annual report of the Medical Defence Union, read at the meeting on Wednesday, shows that the Society continues to enjoy the confidence of the profession. It is a matter of great satisfaction that it should be so. The report shows that those who follow the medical calling are peculiarly liable to need the aid and advice of such a Union. It is, perhaps, remarkable, and altogether creditable, that medical men should not oftener be questioned as to the high tone and character of their work, when we consider the peculiar nature and disadvantages of it. The medical man is called to see human nature at its worst, when it is in a morbid state of peevishness, or excitability, or sensitiveness, sometimes of actual depravity and passion. It is not always possible for him to see his patient in perfect conditions and in the company of intelligent and sensible witnesses. Apart from the cases of morbid feeling or avarice in which claims against medical men often arise there is the large number of charges of malpraxis which it is so easy for ungrateful or unprincipled patients to make, and difficult for practitioners to refute, and the mere repetition of which involves a publicity and a worry that are great evils. The report shows clearly the "difficulties and pitfalls of medical practice" by the fact that with a membership of 1828, and after excluding trivial cases, the Union received 102 applications for assistance, in which the complaint was of material importance and required deliberate handling. A careful perusal of this interesting report convinces us that the membership of the Society should include all the practitioners of the country, seeing that it is the only Society whicht akes under its protection the good name of its members when that is assailed by malice or by thoughtlessness. Union is strength, especially for defence. Men will hesitate before they bring aspersions against a man when they know that he is backed by his fellows and by a well-ordered and responsible society. The report refers to several instances to show that the breath of slander quickly dies out on the appearance of the Union. In one such case a demand for apology and withdrawal of slander by the honorary secretaries obtained by return of post the following: "I humbly beg to apologise, and I willingly withdraw. Trusting you will forgive me."

There are two or three reasons brought out in the report which justify us in commending this Society to the hearty support of the profession. First, the steady growth of the Union and of its funds. The growth in the number of its members in the last four years is eloquently represented in the following figures—1888, 442; 1889, 834; 1890, 1446; 1891, 1828. Secondly, the Guarantee Fund—which, by the way, has not hitherto had to be drawn on—is increasing, as the following figures show. It was in 1888, £538; 1889, £1249; 1890, £2173; 1891, £2826. It is safe to assume that when a society grows so steadily and withal so largely it is giving its members a decided sense of security.

There are other reasons which lead us to recommend our readers to become members of this Union. One of them is because the whole management shows a great deal of judgment and discretion. Not the least indication of these indispensable qualities lies in the fact that the Union keeps itself strictly, and with determination, to its own business. Its primary business is the personal defence and vindication of its own members when they are unjustly assailed in their professional character or capacity. A few members seem to have expected the Union to defend them in other actions, or actions for common debts; but this would be clearly outside the province and purpose of that body. The Council of the Union, too, set their faces against making them a party in professional and Parliamentary agitations. The modest subscription, while sufficient for their purposes, will not bear any such extension, and all men who value the Union for accepting a function hitherto unprovided for will regard its Council with more respect and confidence for firmly keeping it to its proper work. When we are told that the honorary secretaries, Drs. PHILLIPS and BATEMAN (excluding divisional secretaries' work), have written in 1891 no less than 7231 letters, we can easily see that their energies are already strained to the utmost. All this good work and success might be sacrificed in a few weeks by ill-advised measures. It is gratifying, therefore, to learn that changes in the articles of the constitution have been made which secure a continuity of policy by securing a certain perpetuity of office to a proportion of the Council. It is easy to make ducks and drakes of other men's work achieved by great labour and trouble. This disaster we trust will be averted by the unanimous support of the members to an alteration of the articles, which will secure the continuance in office of those whose experience in such special work has brought the Union to its present satisfactory position.

Annotations.

"Ne quid nimis."

THE REGIUS PROFESSORSHIP OF PHYSIC, CAMBRIDGE.

THE announcement that Dr. Clifford Allbutt had been appointed to succeed the lamented Sir George Paget in the Regius Professorship of Cambridge must have come on many with some surprise. Even the "calm and serene air" of Cambridge may have been slightly ruffled by the news, where more than one physician may have had hopes in connexion with the vacancy. All will admit, however, that the actual appointment made is one that is likely to redound to the credit of the University and to import into the region of Medicine there a certain element of freshness and originality which cannot be too highly rated. Dr. Allbutt is M.A. of Cambridge. He graduated there M.B. in 1860 and M.D. in 1868. He was elected Fellow of the Royal College of Physicians in 1882. Before his acceptance of a Commissionership in Lunacy—which we presume he will now resign—he had acquired a high reputation in Leeds and the neighbouring counties as a physician, and his writings on medical subjects were always received with great interest by the profession. The duties of the professorship are not, we believe, onerous. But they are highly honourable. The Regius Professor is, by virtue of his office, at the head of the medical school. He gives lectures, though not on the Scotch scale. He

takes part in the examinations, which are now pretty heavy, and presides at the exercises for M.B. and M.D. The office is thus described in a late Cambridge Calendar: "Founded by Henry the Eighth, 1540. Stipend £40 a year, reduced to £34 18s. 0d. The appointment by the Queen. A house and premises were left to the professorship by Mr. Crane in 1654. The site being required for the building of the Senate house in 1724, they were exchanged for property in Market-street. The present professor also receives £300 per annum from the University chest in lieu of fees for M.B. and M.D. Acts." There have been seventeen professors since 1554, when the first, J. Blyth, M.D., of King's, was appointed. We congratulate Dr. Allbutt on his appointment, and wish him all pleasure and success in the exercise of the functions of the honourable post.

FOOT-AND-MOUTH DISEASE.

THIS disorder continues to spread, notwithstanding the restrictive measures adopted, and there is much reason to apprehend a greater extension. Since we last commented on it outbreaks have been reported in Sussex, at Hayward's Heath—where a herd of fifty-one cows and forty-two sheep were found to be infected,—so that Kent and Sussex are now invaded; and in the south of London—at Peckham—120 fresh cases have been discovered, which, if the animals are slaughtered, will, it is stated, entail an immediate loss of £2000. The Metropolitan Cattle Market at Islington has been closed, in order to have it thoroughly cleansed and disinfected; and every portable article which might carry infection has been destroyed on the spot. The origin of the disease in this country is still a profound mystery. An official report has been published at Copenhagen by Professor Bang, the Government veterinary surgeon appointed to investigate the health of cattle in the district from which those said to have introduced the plague into this country were drawn. The main conclusions arrived at in this report are that there is no possibility of the contagion having been contracted either at Thisted, whence the cattle came, or on the railway from that place to Esbjerg, where they were embarked; and that the disease was not contracted on board the ship which conveyed the animals to London; but that there is great probability of their having become infected in the Islington Market. In support of the last of these conclusions, Dr. Bang points out that one of the four cattle from Thisted was not attacked by the disease, and that no Danish beast which was sold and removed from the market on Feb. 1st, three days before the outbreak was discovered, was found to have been afterwards affected. This gives support to the doubt we expressed last week as to these cattle being the culprits. At any rate, it is now only too evident that the country has again been invaded by a serious disease, notwithstanding the severe lessons which it had already taught us, and which should have preserved us from another visitation. An opening has been left for its admission, and this fact shows that there has been something wanting in our knowledge of it. Whether this want has been due to negligence, ignorance of its prevalence on the Continent, or of the flimsy nature of the boundary that separates Denmark from Holstein, in which the malady is tolerably general, we do not presume to say. We are now more concerned with the public and private interests that are at stake in the United Kingdom, and the dangers that threaten the health of the people through the prevalance of a virulent and embarrassing disease of this kind. The money loss already incurred must be very heavy; what it may be, if the infection is not quickly stamped out, we have the sad experience of former outbreaks to inform us. It is stated that the Agricultural Department has at the present moment forty inspectors constantly engaged in visiting the 2000 dairies in London, in order to discover promptly any cases of foot-and-mouth disease that may appear. These are, probably, irrespective of the staff belonging to the veterinary section of the Department, who are permanently engaged in the suppression of contagious pleuro-pneumonia in cattle. Two orders have been issued by the Department. One revokes a previous order closing the Islington market when the disease was discovered in it. This order came into effect on the 20th inst. The other order prohibits the movement of cattle, sheep, goats, and swine out of the district comprising the eastern and western divisions of Sussex, and also comprising the boroughs of Brighton, Eastbourne, Hastings, Lewes, and Worthing, and the police district of Hove. It will be seen what a small spark is needed to cause a big conflagration in the matter of contagious diseases, and how a little neglect may breed great mischief.

THE SHOP HOURS' BILL.

THE House of Commons on Wednesday evening was engaged debating Mr. Provand's Shop Hours' Bill, and much of what was said confirms the special report on "Sanitation in the Shop," which we publish in another column (p. 490). The matter will be referred to a Select Committee, so that it is necessary to draw the greatest possible attention to the subject and prevent its being shelved. The division in the House of Commons was, however, significant. In spite of Mr. Matthews' opposition and Mr. Balfour's request that the Bill should be withdrawn, Mr. Provand carried the second reading by 175 votes against 152. This shows a strong disposition on the part of the House to effect some improvement in the hard and unhealthy conditions prevailing among shop assistants. We shall be pleased if our reports on the subject add a fresh impulse to this very necessary reform movement.

URBAN SANITARY AUTHORITIES AND THE FACTORY ACT.

THE Bristol urban sanitary authority have hit upon the very practical expedient of publishing a simple digest of the Factory and Workshop Acts of 1878–91 and allied Acts. This sort of synopsis, when folded, can be easily carried in the pocket for reference, and will save much loss of time involved in the tedious process of reading through the Acts. It is drawn up by the medical officer of health and the borough engineer. It is explained that a workshop differs from a factory, inasmuch as in the former no machinery with motive power, steam, water, &c., is used. Then a domestic workshop differs from an ordinary workshop, because the former is a dwelling-house, in which none but members of the same family work together. It is next shown how in urban sanitary districts out of London powers are transferred to the sanitary authority to inspect both factories and workshops, and prosecute summarily the owners or occupiers of any and all such places where insanitary conditions endanger public health. The sanitary authority is, upon a certificate of the medical officer of health or inspector of nuisances, to serve a written notice on the owner or occupier of the factory or workshop, and if the limewashing, cleansing, and purifying is not carried out as ordered, a fine not exceeding ten shillings per day can be inflicted, and the authority may do the work itself and recover expenses summarily. Each sanitary authority must organise a systematic inspection, and not wait till complaints are received. Should the sanitary authority fail to accomplish these duties—and they extend to the inspection of laundries as well as to all factories and workshops, including those where only adult males are employed—the Secretary of State may send a

special inspector down, who will supersede the local sanitary authority, take action, and recover expenses from local rates. The sanitary authority has power to inspect any "house" for nuisances from 9 A.M. to 6 P.M. A "house" means a factory and other building in which persons are employed in any manufacture, trade, or business. Where, in such places, persons of both sexes are employed, separate sanitary accommodation must be provided, and in all workshops a proper supply of water must be secured. Domestic workshops do not come under the sanitary provisions of the Factory Act, but remain under the control of the sanitary authority according to the Public Health Act, 1875. In respect to bakehouses, there is practically no change in the law. The very considerable increase of work and responsibility now thrown on the sanitary authorities is set forth by the figures given in respect to the Bristol urban sanitary authority. This authority finds that no less than 1700 workshops where women and young persons are employed are transferred to its control; but adding to these the "adult male" workshops, there will be an increase of some 2000 to 3000 more. The initial work of ascertaining the areas and cubic spaces in each case will necessitate prolonged and systematic inspection. It has already been decided to appoint one extra inspector, and it is probable that this addition will not suffice. Then there are some 600 to 700 new workshops and factories, one-half of which will come under the provision of the Factory Act with regard to stipulations for the construction of proper means of escape in case of fire. This is to be enforced where more than forty persons are employed, and the construction of the factory was commenced after Jan. 1st, 1892. In those cases the sanitary authority must issue a certificate, and a factory cannot be opened until it has obtained this certificate. All this additional work has not been imposed before it was needed, and the Bristol urban authorities are to be congratulated on their apparent desire to carry out the new law with energy and promptitude.

STRYCHNIA IN SNAKE-BITE.

DR. WOLFGANG HUNT of the Toowoomba Hospital, Queensland, gives an interesting account in the *Australasia Medical Gazette* of a case which had come under his care. The patient was a child aged sixteen months. An elder sister, while playing with her a little way from home, heard her scream, and saw a snake clinging to her hand. Running to the house she quickly fetched her mother and an uncle, who found the child crying and holding the third finger of the left hand, on which was a small punctured wound. The snake was killed as it was making off, and found to be a "death adder." The child was taken to the house, and the end of the finger removed, the stump being sucked and drenched with ammonia and ligatures applied to the arm. She was then brought to Toowoomba for the nearest medical aid, ammonia being applied to the hand meantime. An attempt was made to give stimulants by the mouth, but vomiting immediately followed their administration. On admission to the hospital, three hours after the accident, the child was almost comatose, the body and the extremities cold, pupils dilated and insensitive to light, the pulse rapid and irregular. The child was at once wrapped in hot flannels and heat applied to the limbs, while four minims of liquor strychniæ were administered hypodermically, and a strong faradaic current applied to the nape of the neck and along the spine. Fifteen minutes later another four minims of liquor strychniæ were injected, and almost at once a change began to manifest itself in all the symptoms, and in a short time the child recognised and played with its parents. With the exception of a few slight muscular twitchings recovery was uninterrupted, and the child was discharged the next day in apparently perfect health and none the worse, except for the loss of her finger. The case is very important, especially with reference to the means used for procuring recovery—viz., the hypodermic injection of strychnia, and Dr. Hunt is to be congratulated on his success in this case, as well as in that of another patient whom he mentions as having been admitted in a similar condition after being bitten by a brown snake, and in whom also recovery followed the hypodermic injection of strychnia.

WELLINGTON COLLEGE.

WE are authentically informed that on the 12th inst. three cases of diphtheria occurred among the boys of Wellington College at the Imperial Hotel, Malvern. The boys were at once sent to a house which had been retained as a sanatorium. The cases are stated to be of a mild type, and seem to have been imported from Dulwich, from which place two of the three boys attacked had come a week previously. The other boy attacked slept in the same room. The outbreak may be accounted for in several ways. There is the possibility of some of the bedding used at Wellington College having been overlooked in the destruction and disinfection which took place at the time of the last outbreak, or it may be, as is suggested above, an outbreak from a fresh importation of infection. There is also the possibility of a very long period of incubation—a theory which gains some importance from the fact that another case has occurred in a Wellington boy, who has not yet returned to Malvern after a period of ten weeks, and who has not apparently been subjected to any fresh infection. We are glad to state on good authority that the sufferers are now fairly convalescent, and that no fresh cases have occurred.

BLINDNESS INSURANCE.

A PROSPECTUS has been issued conveying what is apparently at present no more than a bare suggestion of a scheme of insurance against the risk of blindness. There are few mishaps which are intrinsically more fitted to be the subject of a provision in this way, for the comparative infrequency of its occurrence should make the premiums very manageably small; while, on the other hand, the extent of the disaster when blindness does befall an individual is so serious as reasonably to claim the attention of those whose future is in this respect seemingly the best assured. The only objection that occurs to us is that insurance in this piecemeal fashion is both costly and bewildering. It is costly because every several branch demands a separate organisation, with all the attendant expenses; and bewildering because the contingencies against which insurance provision may be made are so multitudinous that no man can be expected to deal separately with them all. The branch now proposed might certainly be with advantage added to some of the subsisting insurance schemes, though we doubt its adequacy to form the exclusive material of a new adventure.

VENTILATION OF THE HOLDS OF SHIPS.

A VERY important question concerning the ventilation of holds in ships has been raised by a letter addressed to the secretary of Lloyd's. This letter is written by Mr. J. Stanley Metcalfe, consulting secretary to the North of England Protecting and Indemnity Association. Formerly the hatches were the only means of ventilation for the holds of ships, and these were only lifted off when the weather was fine and dry. Porous cargo had therefore no opportunity of absorbing moisture from foggy or damp weather. But now there are large cowl ventilators, utilised in all weathers, and which let down on to the cargo any amount of damp air. This is readily absorbed, notably by such substances as jute. On the other hand, the ventilation

is not sufficient to dry the cargoes. An experiment to illustrate this fact is suggested. If we place dry tobacco in a jar with a small hole in the lid and expose the jar to humid air the tobacco will become quite damp, and then, even if removed into a dry, warm room, it will remain moist for a long time. Though the small hole, like a cowl on a ship, suffices to let the dampness in, it does not suffice to dry the tobacco. But if we remove the lid of the tobacco jar, or, in the other case, the hatchway of the ship, when the temperature is warm and dry, then the tobacco or the cargo will be in a position to be dried by the evaporation of the moisture. We need hardly point out how injurious to the cargoes and to the health of the persons on board such dampness must be. Where there is a vegetable cargo, such as potatoes, onions, &c., the probabilities are that the damp will cause fermentation, and occasion not merely the destruction of the cargo, but a foulness of atmosphere dangerous to health. This is so much the case that captains sometimes close all the cowl ventilators as soon as they are at sea and away from the control of the port sanitary authorities. Evidently the regulations as to the ventilation of the holds where cargo alone is packed require, in the face of these facts, careful revision.

SIMULTANEOUS LIGATURE OF CAROTID AND SUBCLAVIAN ARTERIES.

ON the 22nd inst. Mr. Mackellar ligatured simultaneously the carotid and subclavian arteries in a case of probable innominate aneurysm at St. Thomas's Hospital. The patient, a man aged thirty-four, a constable of the Metropolitan Police, who had been in earlier years a professional runner and afterwards served in the cavalry, felt the aneurysm a month before he came under treatment in the hospital. A special point in the case is that he has undergone ligature of the superficial femoral artery on each side for popliteal aneurysms. The first operation was performed more than four years ago, the second about two and a half years since, and he carried on his duty as a constable until the appearance of the aneurysm for which he is now under care. Since the ligature of the femorals (also by Mr. Mackellar) he has done work in the mounted branch of the service. It is possible that a fall when on duty in November, when his horse fell with him and injured his chest, has had something to do with the causation of the aneurysm for which the recent operation has been rendered necessary. Up to the present, progress has been most satisfactory, the aneurysmal swelling is diminished in size, and the pulsation is considerably less.

EXPORTATION OF THE RUSSIAN FAMINE FEVER.

IN dealing with the Russian famine, we pointed out the danger which other nations incurred. The famine, we urged, would in all probability engender plague and pestilence in Russia, and it was a question whether these evils may not travel further, and Russia become a centre of contagion that will spread to other parts of Europe or Asia. We did not think this evil prophecy would so soon be realised; yet this very week one of the Cunard steamers, the *Umbria*, has been refused free pratique at the port of New York. There were on board passengers from Russia suffering from the typhus fever that has been raging in so many parts of that country since the more general spread of the famine. The *Umbria* was put into quarantine, much to the inconvenience of all on board, and even the saloon passengers were not allowed to proceed to their destinations. The most severe measures of disinfection have been imposed. As the *Umbria* started from Liverpool the passengers suffering from what seems like the Russian plague-fever must have travelled in England while the contagion was going through the period of incubation, and before any precautions were or could be taken. When we consider that the Russians have no particular knowledge of the dangers of infection, that their education, such as it is, and their laws, do not tend to engender in their minds any sense of the duty they owe to the public in such cases, we may feel wellnigh certain that persons suffering from this highly contagious fever will be smuggled into or through England. While famine, religious and political persecution, drive so many Russians to seek refuge abroad, we must naturally expect that a certain proportion of these refugees will bring disease and the germs of disease with them. Therefore we come back to our original contention that the famine in Russia is not merely a local disaster and a local question. We are all more or less concerned and interested in it, and this not merely from motives of humanity, but because our own security is also at stake.

THE HOSPITAL SATURDAY FUND.

THE meeting of the Hospital Saturday Fund at the Mansion House, under the kind auspices of the Lord Mayor, was a distinct success. The fact that the workshop contributions were less than in the year before by £1300, Mr. Acland, the chairman of the fund, attributed to strikes. The fund having now reached nearly £20,000, it begins to excite the respect of the public, and should stimulate the liberality of working men. It is to the organisation in workshops and to the naturally generous and sympathetic nature of the British workmen that we must look for a sum still more worthy of their class in this great metropolis.

MALE NURSES' MUTUAL BENEFIT ASSOCIATION.

A NURSING agency, formed under the above title, has just commenced operations for the purpose of providing trained and certificated male nurses upon terms which shall secure to the nurses themselves the full benefit of their earnings. The principle of such organisations is one which we cannot but approve, since the existing agencies are unquestionably in many instances conducted in such a way as to leave much to be desired from the point of view of the nurse, the proportion of the nurses' earnings which is absorbed by the mere machinery of the agency being so excessive as to merit the reproach of extravagance. When these deductions go to make a private fortune there is no reason why any tenderness should be manifested towards the system which injures, in the interest of the private adventurer, both the public and the nurse. Where the agency is conducted by a hospital or nursing school the case is in a measure different, for it is undoubtedly convenient to the nurses that they should have the opportunity of defraying in this way the cost of their education, and the public gets the benefit of a guarantee of efficiency endorsed by the Training Institution. Yet even in this connexion the fitting limit of the trainer's lien upon the nurse's earnings is not always observed, and cases of hardship undoubtedly arise even where the desire of those who preside over the administration to deal fairly is open to no doubt whatever. These voluntary associations of nurses for the purpose of minimising agency expenses may therefore be very fitly encouraged in the interest both of the public and of the nurse. If they succeed in maintaining a high standard of efficiency, they will benefit both parties. The benefit to the nurse is obvious. The benefit to the public is no less real, since the cost of the nurse's services is necessarily aggravated by the addition of agency charges which, whether great or small, must, like all other costs of the same kind, be paid by the customer. The public then has a substantial pecuniary interest in arrangements which

minimise these additional charges, and place at its disposal the nurse's services at but an inconsiderable cost beyond the nurse's pay. So much—and it is a very substantial advantage—the Nurses' Associations have in their favour; whether they will eventually succeed or not must mainly depend upon their ability to maintain a standard of personal and professional qualification throughout their ranks which will command public confidence and support.

THE REPORT OF LORD WANTAGE'S COMMITTEE.

THE report of Lord Wantage's Committee on the condition of the army has been issued on the eve of our going to press, consequently we can only briefly refer to it at present. The Committee have gone into the whole subject in an exhaustive way, and the report appears to be an able and statesmanlike document. Of course, it is not likely that those who hold extreme views, and who either regard our present military organisation as the best or the worst of all possible systems, will be satisfied. Any way, the committee consider it the only one practicable at the present time. On the subject of "short" or "long" service, they hold that short service is a necessity, and that the matter is not open to argument. The present difficulties are not attributable to the short service *system*, but to the fact that successive Governments since 1872 have never carried out the principles on which it was based when adopted. And they go on to demonstrate how the strain caused by filling up the army in India and abroad has necessarily brought about the present state of things. The Committee recommend various changes of an important character for increasing the Home establishments liable to furnish drafts, and for the improvement of the soldiers' position and comfort. Among other things we are glad to notice that attention is directed to the reduction of the guard duties in London, especially at night, so far as is compatible with the proper performance of functions of State and the military training of the men of the Guards. As we said years ago, we have never been advocates for a "coddling" system for our soldiers; but night duties, especially in our climate in winter, entail a constitutional strain on young men, and are a cause of sickness and inefficiency. The number of sentries in London has always seemed to us unnecessarily large.

"PROPHYLAXIS OF HEREDITARY TUBERCLE."

UNDER the above title an interesting paper is contributed to the *Journal de Médecine de Bordeaux* of Dec. 13th, 1891, by Dr. E. Solles. He describes in detail the various observations he has made on animals. He inoculated guinea-pigs and rabbits with matters obtained from scrofulous children, and the conclusions at which he arrives are as follows:—1. When tubercle is hereditary local tubercular lesions develop a longer or shorter period after birth. As a rule these lesions increase in intensity and extent with the age of the patient, and they become more firmly established as time goes on. They obtain their maximum of frequency in young adult life. In the first few years of life there seems to exist a period, of variable duration, in which the spores of the bacilli, although capable of being stirred into activity, are yet capable of being thrown off, and if this takes place the individual may escape. Dr. Solles elaborately describes it as "la période d'inertie silencieuse de l'ensemencement tuberculeux congénital." 2. This period, during which the spores are inactive, lasts a variable length of time, the period apparently depending upon the number of spores which have accumulated within the fœtus and the ease or the reverse with which they are eliminated from the system. 3. The tubercular material may be got rid of in several ways. The fæces and urine of children, tubercular by heredity, have been proved to be capable of producing tubercle in guinea-pigs. The blood, sweat, saliva, and tears, although there is no reason why they should not be infective, have as yet given negative results. 4. Hereditary tubercle is essentially a "parasitic retention." Those affected may escape from local lesions or not, the number of such local lesions depending, as before said, on the number of spores, the rate at which they develop, and the deficiency of resistance on the part of the host. 5. We cannot yet say with certainty whether tuberculosis kills by the actual damage which the organs undergo and the results of those injuries, or by the toxic action of the ptomaines which are evolved, or by toxic agents not yet determined. 6. The preventive treatment of hereditary tubercle must follow on the lines of nature; it consists in aiding and hastening as far as possible the expulsion of the tubercular germs from the organism—in short, to cause the elimination of the spores before they commenced to develop, and if possible before they have become encapsuled by fibrous tissue. The treatment is based on two lines, eliminative and restorative. 7. In the first years of life the physician is obliged to proceed with caution, and to employ only those means which will not be too great a tax on the little patient, and the treatment should be interrupted occasionally, the intervening periods being regulated by the circumstances of the case. This is particularly to be observed with the expulsive treatment up to the age of puberty. The first measures are to ensure that all the secretory organs are acting freely; repeated purgatives, chosen with regard to the age of the patient, should be administered, and the action of the skin assured by active muscular exercise. Dr. Solles thinks that the portal system contains the largest number of spores, and consequently the functions of the liver should be stimulated. Iodide of potassium seems to have a powerful eliminative action. The skin should be further stimulated by hot baths, and also by sulphur baths, and the natural medicinal waters.

EXTENSION OF THE NOTIFICATION SYSTEM.

A VERY suggestive report has been issued by Dr. Henry Armstrong to the city of Newcastle-upon-Tyne, on the question of extending the system of compulsory notification to measles and to whooping-cough. In opening the subject Dr. Armstrong refers to three diseases as typical maladies which are spread by communication between the sick and the healthy—namely, small-pox, scarlet fever, and typhus fever; and, as regards these, he says that they have all been very remarkably reduced both in number of cases and deaths since their notification came into force. And, then, dealing with the contention that, in view of the magnitude of the existing epidemics of measles and of whooping-cough, the expense of notifying these diseases would be an extravagant one, he states significantly that precisely the same argument could have been advanced in respect of scarlet fever, small-pox, and typhus fever in 1882, and that had this view then influenced the Council the reduction in disease and death which notification has brought about would not have taken place. He also refers to the suggestion which has at times been made, to the effect that since measles must be regarded as effective in the pre-eruptive stage, therefore it is useless to notify its occurrence, by reminding the Council that, even if there be inability to check measles during the first few days of its occurrence, that cannot be accepted as a reason for failing to take every precaution possible by way of preventing its spread during the subsequent three or four weeks, when it must also be regarded as infective from person to person. This question of measles notification is naturally attracting much attention by reason of the exceptionally heavy mortality which it occasions, and,

owing to the belief that a substantial amount of the spread is due to the aggregation of children in elementary schools, a means of extension that could doubtless be materially controlled by early notification of its existence in households, especially in the case of a district so admirably circumstanced in the matter of hospital provision as Newcastle is. Indeed, we learn that a pavilion containing thirty-three beds is available for such a purpose. Perhaps the most formidable point to be dealt with as regards measles lies in the age of the sufferers. In the year 1889 measles caused 14,732 deaths in England and Wales. Of these, 3129 took place under one year of age, and 9731 more between the ages of one year and three years of age; that is to say, there were 12,860 out of the total 14,732 who can hardly be regarded as coming within any material control that could be exercised in connexion with school operations, and of whom many might not be easily removed to hospital unless the mothers were also admitted. But the mere fact of there being difficulties in connexion with the subject affords no justification for sitting down with folded hands whilst one of our principal causes of mortality goes on unchecked; and Dr. Armstrong is not likely to propose a definite line of action except on the belief that it is a right one to adopt. We should hail any efforts made by sanitary authorities in this direction.

THE INSPECTORSHIP OF EXAMINATIONS AND THE GENERAL MEDICAL COUNCIL.

THE Executive Committee of the General Medical Council on Monday last appointed Dr. Duffey as Inspector of Examinations under the Act of 1886. There were, we understand, about a dozen candidates. Dr. Duffey is M.D. Dub., L.M. Rotunda Hospital, and F.R.C.P.I., ex-Medical Scholar, and Senior Medical Exhibitioner, Trinity College, Dublin; Physician and Lecturer on Clinical Medicine, City of Dublin Hospital, &c. He is also Examiner in Materia Medica and Pharmacy in the Conjoint Board for Ireland and Professor of Materia Medica and Pharmacy in the Royal College of Surgeons, Ireland. Dr. Duffey's fitness for the post will be generally recognised, though we confess to thinking that it would have been but satisfactory that on this occasion the appointment should have been given to a typically English representative. On the last occasion none of the three inspectors answered to this description. Still they did their work very well. Doubtless it will be so in Dr. Duffey's case, but there is something in the difference of point of view. The appointment is only for one year.

THE CREMATION SOCIETY'S TRANSACTIONS.

THIS year's issue of the Transactions of the Cremation Society contains a variety of details which will repay the attention of its readers. Besides a full statement of the purposes, methods, and constitution of the Society, and a careful *résumé* of the history of cremation in this country, we find in the record of the past year a narrative of comparative success with which cremationists have no great reason to be discontented. It is true that only the small number of ninety-nine bodies have been actually burnt in the Society's furnace at Woking, but this total was in the year preceding represented by fifty-four, and in 1885 by only three. The principle of cremation, moreover, has gained the nearly unanimous approval expressed by a regular vote of the International Congress on Hygiene which met in London last August, while crematoria are either in contemplation or in course of erection in London (Ilford), Manchester, Liverpool, and Darlington. We may mention as of special interest the publication in this treatise of the latest contributions by Sir Henry Thompson and Mr. Seymour Haden to the literature of the subject. The opposite views of these gentlemen are well known, but they are here expressed in specially clear and practical terms. The former, in the course of an able argument, advocates cremation, especially in cases of death from zymotic disease, as being the only method preventive of post-mortem infection, which is at once easy and fully effective. His suggestion that a special official be appointed in each parish for the certification of deaths will be recognised as one of much utility. Finally, there is something to be said for his economic sense which grudges the use of cultivable land for the purpose of burial. Mr. Haden, on the other hand, is no less true to himself in asserting the full efficiency of the earth for the chemical and innocuous conversion of all dead animal matter freely committed to its action. This Sir H. Thompson himself does not deny, provided there be no adjacent and contaminable water-supply. A demand for legislative action to enforce the methods of sanitary burial forms a natural part of the earth-to-earth system, and on this point we are entirely in accord with its well-known promoter. Until such action is assured we cannot, indeed, be said to have really tested the efficiency of our burial system; nor would we feel disposed, while it is in abeyance, to prefer, though we may agree to sanction, the much more rapid, though perhaps not otherwise more perfect, process of cremation. The value of the Transactions to students of the new method is enhanced by sectional illustrations of the improved Gorini's furnace used at the Woking crematorium, and by a list of works on cremation available for reference.

THE SPREAD OF SMALL-POX.

THE *Echo* quotes the Consular Report for 1890 on the trade of Philadelphia for the following fact. An immigrant landed in 1872 with incipient small-pox. The city was previously absolutely free of the disease. He escaped medical examination, and moved about from district to district. His trail was followed by the march of the disease. Eventually all trace of him was lost, but no fewer than 2585 deaths from small-pox resulted from his visit to Philadelphia. It is not pleasant to think what similar experiences may be in store in England. The disease is in abeyance, though there are signs of reviving activity. It can be kept in check by sanitary police. But what if one or two cases elude such precautions?

SOCIAL REFORM IN INDIA.

THIS question has been discussed in so many forms and from so many different standpoints that it is hardly surprising to see issued still another contribution to the literature of Indian social reform. Perhaps the glaring need for reform is the explanation. Mr. F. Pincott, well known in connexion with Indian subjects, while approving of the principle, writes in strong disapproval of the age limit of Indian marriage, the severity of the punishment decreed, and of the hasty manner in which the Indian Age of Consent Act was passed. He bases his argument on the inherent difference of customs in England and in India, insists that the passing of the Age of Consent Act fixes the English arithmetical idea of morality on the people of India, and alleges that Indian institutions contain safeguards to obviate the evils which might be apprehended to arise from them. In his view much harm has been done by recent legislation, although to our mind the assertion has still to be supported by proofs. He candidly states that hitherto he has stood alone among Englishmen in his views on this question, and we are inclined to think that the present pamphlet will not materially increase the numbers who sympathise with his view. The author admits that social customs are matters of convenience. It plainly follows that if these customs, social or otherwise, are inherently wrong, a remedy must be found. Custom or

habit occurring in individuals or in nations cannot be accepted as a justifiable excuse for disgraceful acts. The South Sea Islander might plead custom in support of his cannibalism. The pretext of obnoxious customs being safeguarded is as thin as the paper bag which encloses a dangerous quantity of gunpowder. On physiological grounds wrong clearly exists. The Hindoo, in this respect at least, does not very greatly differ from the European; and while physiological fact remains a constant factor of the problem it is idle to plead custom, even though safeguarded to an extent far beyond that which is alleged. Mr. Pincott somewhat ingeniously suggests the adoption of a kind of age sliding scale, by which, as he thinks, nature will adapt herself with unerring flexibility to each individual person. A scale of that kind could only result in obviating any beneficial legislation which is likely to be promoted on this subject.

A CASE OF THORACIC ANEURYSM.

IT is matter of common experience that an aneurysm of the thoracic aorta, if it does not implicate any important organs, may attain to considerable size before its presence is revealed either to the patient or to his medical attendant. In not a few cases—especially of aneurysm of the descending aorta—the fatal event has happened without any diagnosis having been arrived at, or even without any notable discomfort having been experienced by the patient. At the meeting of the Berlin Medical Society held on the 3rd inst. (*Deutsche Med. Woch.*, No. 6), Dr. Litten showed a patient forty years of age, who, up to within three weeks of that date, had been working as usual at a factory without any difficulty, although for a twelvemonth he had been complaining of "rheumatism" in the left shoulder. Yet there was obvious bulging in the front of the left side of the chest, most marked in the third intercostal space, where and in the interspace above there was definite pulsation and plain conduction of the cardiac sounds. The heart's apex beat was in the usual place, and, although there was evidence of aortic regurgitation, there was no indication of hypertrophy of the left ventricle. The aneurysmal tumour was distinctly expansile and fluctuating; it probably sprang from the aorta below the origin of the left subclavian artery, and had eroded part of the ribs. There was no difference between the two radial pulses and no delay in the femoral pulses. The left pupil was notably smaller than the right. The patient several years before had a chancre, but it was not succeeded by any secondary signs of syphilis. Dr. Litten commented on the case as showing how large a size an aneurysm in this situation may attain without any distinctive signs being manifest, and he pointed out its further peculiarities in the absence of cardiac hypertrophy in spite of the aortic insufficiency, and also the absence of any delay in the pulse in the lower limbs in spite of the obviously very great dilatation of the descending aorta.

CONTAGIOUS DISEASES ACTS IN TALY.

BY special enactment on March 29th, 1888, the surveillance of prostitution throughout the Italian peninsula was relaxed, and as a consequence venereal disease in its worst forms, particularly at seaports and in garrison towns, so increased that the Government have had to rescind the enactment referred to and return to the regulations previously in force. Professor Angelo Scarenzio, who holds the chair of dermo-syphilography in the University of Pavia, has just read a painfully instructive report on the matter before the Lombard Institute, based on statistics compiled from the various centres of Italian population during the last three years. The aggravation of the diseases in question, not only as to number, but as to virulence, has reached, he says, the point of a *pubblica calamità*. The patients, almost all males, in the institution under his own eye—the "Dispensario Celtico" of Pavia—rose from 166 in the first year of relaxed surveillance to 203 in the second and to 303 in the third; and what impressed him even more painfully was the fact that the augmentation revealed itself especially in the *forme infettanti* (infective forms), which impregnate the system as a whole, and transmit the virus through the medium of generation. In comparison with the other venereal forms, the mean percentage of the infective cases was, he says, in the first year 9·2, in the second year it rose to 17·7, and in the third to 18. Again, in the Foundling Hospital the cases of congenital syphilis, fluctuating between 4·09 and 3·82 in 1888–89, mounted rapidly to 5·22 in 1890 and to 5·46 in the first half year of 1891. The lamentable diffusion of the virus, Dr. Scarenzio adds, is not limited to the classes that have recourse to the "Dispensario Celtico," but it extends to the well-to-do (*ai benestanti*), including special bodies, such as the army and navy. The Government, unable to ignore the facts, have had, by a new regulation issued on Oct. 27th last, to re-establish the obligatory inspection of prostitutes, whether in houses or dwelling apart; to submit the choice of the inspecting physicians to the approval of the Provincial Sanitary Council; to make subjection to treatment compulsory on the patients where there is no guarantee that they can be properly attended to in their homes; and to multiply as well as to maintain the "Dispensarii Celtici." In conclusion, Dr. Scarenzio desiderates "a more vigilant and more extended surveillance, so as to include clandestine prostitution, and bring not only unfortunate women but all venereal patients of the other sex under hospital care." He sees "no reason why the destructive contagion of syphilis should, in comparison with other contagions, be vouchsafed a milder, not to say a favoured, treatment at the hands of the law." This, of course, is but an academic, a pious aspiration, possible of effective fulfilment only in despotically governed States. At the same time one can hardly wonder at its being entertained in view of the horrible statistics that reach us from garrison towns like Ravenna, where the disease is verily a "public calamity," or from seaports like Naples, where Dr. Achille Titomanlio, of the local "Brefotrofio," presents us with such a gloomy picture of the increase of congenital syphilis.

LIFE ASSURANCE CERTIFICATES OF DEATH.

IT is a hard case when a medical practitioner finds himself under the necessity of tilting at the profession to which he belongs, and particularly so when he finds himself called upon to confide his grievances to the lay press; and we are glad therefore to observe that a "Doctor of Medicine," who has recently been writing to *The Times* in a sense which reflects most seriously upon the good faith of his professional brethren, appears to be the victim of a life assurance craze. It is quite obvious, even to the meanest understanding, that the practice of insuring the lives of one's neighbours opens a door to crime. So far the relation thus established does not differ from other human relations, for even those that are most intimate and most benignant are constantly abused by ill-disposed and criminal persons. But from time to time the note of alarm is heard—now from the jury-box, now from the Bench, and again in the correspondence columns of the newspapers—that unsuspecting men, women, and children are being done to death for the sake of the proceeds of insurances upon their lives. It fortunately happens that this particular form of crime cannot become rampant without victimising the insurance offices, an interest that is too active and too vigilant to be easily plundered on any considerable scale. Thus it has happened that, although

atrocious crimes have from time to time been brought to light and outraged the public mind, they have invariably proved upon inquiry to be isolated facts, giving evidence, not of a vicious system or a corrupt community, but of the presence of individuals of deep and exceptional criminality. If there be any substance in the charges, which a "Doctor of Medicine" has sown broadcast, of false certificates of death, we are convinced that it comprises only some exceptional facts which have chanced to come under his observation; but so long as such serious allegations rest on the judgment and sound sense of an anonymous correspondent, the profession of medicine may rest content to regard them as a work of imagination somewhat wanting in the power of affording amusement.

WARMING RAILWAY CARRIAGES.

THE Midland Railway Company have long been forward in attention to the comfort and convenience of their passengers. Their initiative has had much to do with modern improvements in third-class accommodation. It was they who first familiarised the public of this country with the railway carriage lavatory. Quite recently their characteristic zeal for any change that tends to increase the amenities of travel has introduced what promises to prove a useful and economical method of carriage warming. In so doing the company have utilised the suggestion of Herr Pfuetzner, mentioned in THE LANCET of May 2nd, 1891. Since the new year trains have been running between St. Pancras and Bradford in which a system of heating by means of pipes in direct communication with the engine has been carried out, so far with complete success. According to this arrangement the pipes can be filled either with steam or with hot water. A moderate average temperature can thus be maintained without trouble. When we contrast this apparently easy and obviously convenient process with the elementary and laborious method until now in common use, and remember that it has been employed in domestic heating for many years past, we can only feel the more surprised that it has not sooner been applied to the purpose above mentioned. It is to be hoped that we shall, as time goes on, have such confirmation of its successful use as will ensure its general adoption by railway authorities. The advantage obviously resulting to the health as well as the comfort of travellers from the assured maintenance of an equable temperature in each carriage need not be insisted on.

DANGERS OF SULPHONAL.

THAT this now much-used drug is not entirely without danger even in medicinal doses has been several times already pointed out, and Dr. John Grant, of the United States Army, has in a recent contribution to the *Boston Medical and Surgical Journal* given two instances of inconvenient and somewhat alarming symptoms arising in patients to whom only twenty grains had been administered. The first patient was a married lady suffering from an attack of influenza, with symptoms predominating in the thoracic viscera and in the nervous system, but who, after a week's illness, considered herself convalescent. As she was still sleepless, twenty grains of sulphonal were given in hot water. In a few minutes profuse perspiration followed, and the patient sank into what appeared to be a sound sleep. Next morning, however, she awoke unrefreshed and in a state of complete prostration, so as to be unable to turn in bed without help. She also had a feeling of severe constriction of the head. On account of muscular weakness the patient was unable for some days to leave her room, but ultimately recovered. The second patient was also convalescent from influenza, but suffered from slight excitement and sleeplessness. Twenty grains of sulphonal were administered at bedtime, with the same almost immediate effect. Next morning he was in a condition of similar prostration, almost unable to move a limb, and suffering severely from a feeling of constriction in the head, and with a weak, compressible pulse. These two cases would seem to show that sulphonal is not without the risk of some inconvenience if administered in cases attended with considerable physical prostration.

DIPHTHERIA AT MONMOUTH.

DIPHTHERIA has broken out in two schools at Monmouth under circumstances which cause a good deal of local anxiety. Perusal of an account of the measures which are being taken lead to the idea that every effort will be made to ascertain whether the disease has been associated with any sanitary defects in the two establishments in question, and if so, to remedy the points needing amendment. This is as it should be. But we have come to learn within recent years that, quite apart from sanitary defects, so-called, there are special conditions attaching to what has been aptly termed "school influence," both in the development and in the spread of this disease, and it is to be hoped these will not be lost sight of. In the meantime, it must be admitted that Monmouth town is, both topographically and sanitarily, a locality by no means favourable to immediate prevention of diphtheria extension. It is, indeed, precisely the sort of town where the disease may be expected to cause difficulty, and to be maintained by a series of sore-throats which at this time of the year often have a tendency for a time to lose the special features which commonly attach to recognised diphtheria.

THE TOXTETH INFIRMARY.

THE Toxteth board of guardians have now decided to provide infirmary accommodation on a reduced scale. Instead of arranging for 420 beds, as originally intended, the scheme adopted relates to the provision of 244 beds, and it is reckoned that the cost will be £32,700. This will, it is estimated, involve a rate equal to one penny in the pound for thirty years. We are glad that the matter is no longer to be postponed.

PANIC AND ACCIDENT.

REGRETTABLE as it is in every way, the recent serious accident at a children's entertainment in the rooms of the South St. Pancras Unionist Club was, in its origin, so simple—we might almost say so natural—that it is difficult to lay down any rule which could be relied upon to prevent its recurrence. A boy jumps up, as restless urchins will, and overturns the lamp of a magic lantern. Some oil escapes and burns upon the floor; no one is burnt, there is little or no danger; but soon there comes the almost inevitable explosion among the nervous elements present in the audience. Some one cries "Fire!" a rush of children follows, and several are dangerously injured. Experience may register more than one lesson in connexion with this incident. Thus we recognise an error, slight, perhaps, in everything but its mischievous influence, in allowing a child to sit anywhere near the lantern; yet who would have thought that this so greatly mattered? Then we have to note and to take account of that unstable nervous temperament, the ground in which all panics grow and which was here so unhappily manifest. Time will be old and education also, we fear, before its cure or disappearance may be looked for; but this is no reason why we should not begin early to teach, as the first principle of safety in the presence of danger, the duty of keeping quiet. First a moment of cool reflection, then action. The lesson must be learned in daily tasks and duties if it is to guide us in a crisis. In a word, it is the common sense of in-

dividuals rather than set rules that we must rely upon to prevent such accidents as that above mentioned. Managers of entertainments, it is to be hoped, will also be careful in future, by means of suitable barriers, to keep their audience, adult or juvenile, well away from all apparatus. We need hardly mention the necessity of selecting such managers from among persons of adequate nerve and intelligence. In the case already quoted it is, at least, a matter for satisfaction that they seem to have justified the wisdom of their selection by their cool and rational behaviour.

GRANT COLLEGE MEDICAL SOCIETY.

IN the form of a retrospective address, we have received a clear and interesting account of good work done for medical science and practice by the Grant College Medical Society of Bombay. It is satisfactory to note that the author, Dr. Rustomjee Naservanjee Khory, who is president for the present session, can well appreciate the social and professional advantages of which he is in his official position the visible representative. There is in Bombay (and doubtless elsewhere in India), he reminds us, an undesirable hiatus between the private practitioner commonly of Indian extraction and his hospital *confrère*, who is usually a European. This gulf the influence of the common Society tends to obliterate, and the brief reports of its proceedings given in this address exhibit in rational harmony the fruitful effects of labour done by both classes of workers in the wide field of medical practice. The Society, notwithstanding its efforts and its excellent purpose, does not entirely escape the tribulations which more or less beset all other like associations. We are told that there is room for improvement in its financial condition, and the attendance is not always what it might be. Nevertheless the membership shows a very substantial increase, and much of the material contributed towards its discussions is of high quality. We may therefore fairly expect for it a useful and an enduring future. The presidential address, however, is not occupied solely with a consideration of the Society's affairs. It contains also a short discussion of the pathology of leprosy in relation to its contagious property; and in the same connexion it exposes and explodes an anti-vaccination fallacy of recent growth, which, with hardly a pretence of proof, and in the face of contradictory evidence, maintains that the operation has assisted the spread of that disease. The author strongly advocates the extension of compulsory vaccination, now for more than twelve years in successful operation in the town of Bombay, to other parts of India. His careful paper closes with an appreciative reference to the Hyderabad Chloroform Commission.

INSANITARY DWELLINGS AT PLYMOUTH.

THE powers given to magistrates under the recent Public Health Act are beginning to be felt in districts beyond as well as in the metropolis. The Act gives the magistrates the power to order the closing of the dwellings proved to be unfit for habitation, and to recover from the owner of the property the expenses of removing the tenants. Two tenements, the owner of which was indicted before the borough magistrates of Plymouth on the 11th inst. under this Act, were described as quite undrained, all the closets wall-locked, the floors rotten and saturated, the walls damp and daubed, the roof gaping, and the place utterly unfit for human beings to live in. To add to the deplorable nature of the dwellings, a pony was kept in a cellar on the premises, the floor of its stable being covered with liquid manure. There were twelve rooms in the house, which, however, were not all tenanted, but the building was occupied by six families, mostly in one room each. The excuse urged for this state of affairs was the old one: that the health officer's statements were exaggerated; that there had not been any outbreak of disease; and that therefore there was no proof that the property was insanitary. The magistrates took the wise step of visiting the property and seeing for themselves, and from their own observations they stated that "they could hardly conceive that such a state of things existed in inhabited dwellings. After visiting the houses they could only say that the description given by the witnesses did not adequately represent the actual state of the place." One of the magistrates remarked that it was most painful to him to find people dwelling in such dens in a town surrounded by such natural beauties. By such enlightened action as that of the Plymouth Borough magistrates, who in this case ordered the "dens" to be closed and imposed a penalty of £10 and costs for each of the two tenements, it is certain that in the future, whether near or remote, better sanitary surroundings will be secured, leading to the general improvement of the people.

FOREIGN UNIVERSITY INTELLIGENCE.

Bordeaux.—Professor Pitres has been appointed Dean.

Santiago.—Dr. A. Limonena y Zamalegui has been appointed Professor of Clinical Medicine.

Valladolid.—Dr. A. A. Cortes, Professor of General Pathology, has been appointed to the chair of Medical Pathology. Dr. Luis Roa y Vilchof, Professor of Therapeutics in Grenada, has been appointed to the chair of Hygiene.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Heinrich Rosenthal, editor of the *Allgemeine Medicinische Central-Zeitung*, after only two days' illness.—Dr. Isidor Ganz, the Nestor of Carlsbad physicians, at the age of eighty-seven.—Dr. R. Ritter von Schmerling, body physician to the Grand Duke Albrecht, at the age of eighty-two.—Dr. Hermann Aubert, Professor of Physiology at Rostock.—Dr. R. Brossard, formerly Professor of Internal Pathology at Poitiers.—Dr. Joh. Wagner, Professor of Anatomy at Kharkoff.—Dr. D. Ayers, Emeritus Professor of Surgical Pathology at Long Island College Hospital, Brooklyn.

THE *London Gazette* announces that the Queen has been pleased to direct Letters Patent to be passed under the Great Seal of the United Kingdom of Great Britain and Ireland, granting the dignity of a Baron of the said United Kingdom unto Sir William Thomson, Knt., President of the Royal Society, and the heirs male of his body lawfully begotten, by the name, style, and title of Baron Kelvin of Largs, in the county of Ayr.

WE regret to hear of the death of Mr. George Pearce, who had held the post of divisional surgeon of the B Division of the Metropolitan Police for the last forty-six years. The death of his wife the day before appears to have produced the attack of angina pectoris from which he died on Monday last.

SMALL-POX is said to be raging violently at Saratoff, in Russia, in which country vaccination is not compulsory. In one large village alone 400 children are reported to have died within the last ten days.

THE next International Congress on the subject of the abuse of alcoholic liquors will be held at the Hague in September next.

THE Senatus of the University of St. Andrews has resolved to confer the honorary degree of Doctor of Laws upon Professor Michael Foster, M.D., of Cambridge, and Professor George M'Leod, M.D., of Glasgow.

THE Duke of Edinburgh has appointed Mr. William Hickman, M.B., F.R.C.S., to be Surgeon in Ordinary to his Royal Highness, in the room of the late Sir Oscar Clayton.

DR. F. J. PAYNE has been appointed Joint Lecturer on Medicine at St. Thomas's Hospital.

REPORT OF
The Lancet Sanitary Commission
ON
SANITATION IN THE SHOP.

PART I.

IN these days of labour agitations and of legislation for the protection of labour it is surprising that so little has been done for a large class of workers with whom the public come in daily contact. The victims, for instance, of the East-end sweater, though out of sight and ignored by the public at large, have been discovered and their grievances disclosed; but the shop assistant, who is before us at every turn and in every street, remains unthought of and uncared for. Perhaps it is because he is fairly well dressed and puts on a smile to greet his customers that the public conclude he must be pretty well situated and comfortable. There never was a greater mistake. Even the docker, over whom so much sympathy was expended, is in some respects better off than the shop assistant. Quite a chorus of shop assistants exclaimed in our presence that they wished they could get "the docker's tanner." The Blue-book report on the Shop Hours' Regulation Bill establishes that shop assistants are generally worked eighty-five hours a week, and this at 6*d.* an hour would equal £2 2*s.* 6*d.* a week, but they rarely receive anything like so large a salary. The mechanic as a rule works from forty-eight to fifty-four hours a week, earns 8*d.* and upwards an hour, and need not keep up appearances. The shop assistant works from seventy to ninety hours a week, and competent men earn from 2*d.* to 6*d.* an hour, while there are young persons who do not make more than one halfpenny an hour, yet with this inferior pay they must dress well. What, then, remains in time and in money to procure wholesome relaxation, a healthy home, and sufficient food? The workman is protected by the Factory Act and the Sanitary Act; the shop assistant does not profit by either the one or the other. The Sanitary Act should be of service, but how many sanitary inspectors are there who ever think of examining the premises of retail dealers? For the workmen there are model artisans' dwellings, where the death-rate is below the average death-rate of the metropolis; for the labourer, for the beggar in the streets, there are model common lodging-houses. The homes of the poor are reached by a great variety of agencies. There are missionaries of all creeds, there are official and amateur sanitary inspectors, and any number of philanthropists, who from one motive or another visit slums and the homes of the working classes; but who ever thinks of trying to penetrate behind the scenes of a retail shop, and inspect the rooms where the assistants sleep or have their meals?

The difference between shop assistants and artisans may be noted with great facility in the boot trade. In this trade it often happens that workmen and shop assistants are employed on the same premises by the same master. For instance, we have the branch establishment of a well-known and popular bootmaker. The shop assistants are in attendance thirteen hours and a half for five days a week, and fifteen hours and a half on Saturday. Behind the retail shop there is a workshop, and here the workmen, who are engaged by the week, work ten and a half hours a day, and those who work by the piece nine hours. The assistants in the retail shop profit by the fact that, as the workshop is open to inspection, proper sanitary accommodation has been provided. But the workshop is closed at 6.30 P.M. Then there is no urinal or closet for the shop assistants. What is necessary for the workmen is supplied, but no such care is displayed on behalf of the shop assistants. There are, we are assured, thousands of small shops in London where no sanitary accommodation whatever is provided for the assistants. That, in the absence of sanitary inspection, such should be the case will be readily understood. Many small shopkeepers live on the premises, the closet is upstairs, and is kept locked for the use of the family. A man engaged in a clothier's establishment in the south of London complained that, though there were six assistants in this shop, there was no closet, nor was it possible to obtain a glass of water. There was the bare shop; all that belonged to the house as a dwelling was locked up and reserved for the shopkeeper and his family. As a result, the shop assistants have to run out to the nearest public-house, where they can find a closet and urinal, but where they are compelled to spend a portion of their slender wages in beer. If they are thirsty they have no means of drinking water, and must again resort to beer. Another shop assistant, also working for a clothier, whose shop is situated in the east-end complained that the only cistern available had not been cleaned for several years; the water, therefore, was too dirty to drink. A third shop assistant explained to us that the water in his shop was absolutely foul. It will be readily understood that, what with the flare of gas, the dust, the constant talking to customers, considerable thirst must be experienced, especially in summer weather; and if there is not an abundant supply of pure water on the premises the shop assistants are driven by the force of circumstances to the public-house, and soon find themselves on the high road leading to intemperance. The advocates of temperance would do well to look to this cause of inebriety. There is a philanthropic society which constructs troughs and supplies drinking water to dogs and horses in the street. If the temperance organisations could form a special service to see that a suitable supply of pure drinking water was provided to the human beings who spend the better part of their lives in shops, one of the causes of drunkenness would be removed.

Of course it is only the very small shops that are so badly provided in respect to closets and to drinking water; but, even in large establishments, the accommodation for meals is often altogether disgraceful. At one large grocery shop the assistants complained to us that they were made to take their meals in a dark basement below the level of the street. Here was situated an unventilated closet, with no light and no window. The odour of drains pervaded the whole place. While some grocers allow their assistants to eat their meals near unventilated drains, others do not hesitate to store their provisions round and about closets. This is particularly dangerous when such substances as butter are exposed to the escape of sewer air. At one large provision store, which has branch establishments in different parts of the town, the assistants were loud in their complaints. At one of the branch establishments there was no closet at all for three months. The assistants were obliged to go round to a neighbouring coffee shop. At last they refused to work any longer under such conditions, and then a closet was built for them. At another branch, in the far east of London, the drains were the cause of such an intolerable nuisance, that a plumber was called in and an estimate made for repairs. When, however, the drains were dug up it was found that the extent of the mischief was so great that it was impossible to put them in order for the sum proposed to be expended. The drains were consequently merely covered over again and things allowed to go on much as they were before. It is in the midst of such insanitary surroundings, somewhere in the basement or at the back, that shop assistants are often compelled to take their meals. In the smaller shops they do not have even this much accommodation granted them. We know a high-class dispensing chemist in the West-end where there is neither dining-room nor dispensing-room for the assistants. The dispensing is done behind a screen at the end of the shop, and here, on the dispensing table in the midst of drugs and half finished pills, the assistants have to take their meals.

Another shop assistant, who was evidently in a very bad state of health, complained to us that, though his employer spent his Sundays preaching the gospel, he made his assistants work from 7.30 A.M. till 10 P.M. the first five days of the week and till midnight on Saturdays. When this assistant's mother was dying his employer would not grant him a few hours' leave of absence. This unfortunate man, who is kept at work eighty-nine hours a week, is not even allowed to leave the shop for his meals, nor has he a regular hour for meals, but must snatch his food how and best he can in a dirty corner behind the counter.

In some establishments the food is good, ample, well served, and clean; in others it is far from sufficient, and can scarcely be qualified as wholesome. In provision shops the assistants often come off badly, inasmuch as they are made to eat that which cannot be sold. An assistant working for a large store of this description informed us that in the morning he was given what he defined as "an apology for coffee" and two, or at most three, slices of bread-and-margarine. For the midday meal there was one helping of meat, but this too frequently proved to be Ostend rabbit, for the simple reason that these rabbits will not keep long, and sometimes cannot be sold. In the afternoon there were tea and a round and a half of bread-and-butter. Finally, at 11 o'clock, on going to bed, the assistants were given, in their bedrooms, a small piece of bread, a small piece of cheese, and a glass of water. It would be easy to contract for this style and amount of food at 7*s.* 6*d.* per week per head. Those assistants who were so far privileged as to be permitted to take their meals out of doors had 12*s.* extra wages allowed, and with this they obtained much better board. Another shopman complained of his employer, who had made a bad speculation in pickled pork, and consequently fed his assistants on his superfluous stock for three months. On Saturday nights assistants are always very eager to sell off the stale remnants, so that they may not have to eat them themselves the next day. Several grocers' and cheesemongers' assistants frankly declared that if their appetites were satisfied, it was only because they helped themselves to such things as eggs, cheese, rashers of bacon, cocoa, &c., which could be abstracted from the general stock without attracting notice. They argued they had undertaken to work for food and wages, and conceived that, if they had not enough food, they had a right to help themselves to more. The impression seemed to prevail that assistants in small drapers' shops were the worst fed, and a sensational story was told us of a draper in a West-end suburb. This draper was stated to have usually gone to a butcher's between eleven and twelve o'clock on Saturday nights, just when the shop was about to close. He would then offer to purchase all the remnants, or "block ornaments," at 2*d.* a pound. As these fragments at so late an hour could not be sold, the butcher generally accepted the offer, and the draper, having arranged a method for keeping this meat in ice, fed his assistants with it during the ensuing week.

Though we may hope and believe that such bad and insufficient meals are altogether exceptional, there is one grievance which is not at all exceptional, but is, on the contrary, very general in almost every branch of trade. We allude to the shortness of the time allowed for meals. Very frequently only a quarter of an hour is given for tea and breakfast and half an hour for dinner. This is altogether insufficient in itself; but in very large establishments it sometimes takes nearly five minutes to go from the counter to the dining-room, so that the food has to be consumed in great haste. In small shops assistants are often called away in the middle of their meals to serve customers. All this naturally tends to interfere with the process of digestion, and dyspepsia is very prevalent among this class of workers.

Over-worked, under-paid, and under-fed during the day, the shop assistant is scarcely more fortunate at night. The sleeping accommodation, when this is provided, also escapes all sanitary control. The Common Lodging Houses Act protects vagrants and vagabonds generally when they resort to the poorest lodging-houses, but there is no measure that establishes any sort of supervision over the sleeping accommodation given to the shop assistant. There are consequently many gross abuses. An assistant described to us that where he worked he slept with seven others in a very small room. At half-past seven in the morning they had to be up to open the shop. In their room there was absolutely no furniture—nothing but beds,—and to wash they had to descend three flights of stairs, where there was a lavatory provided for all the shop assistants, numbering in all thirty-six persons, some of whom sleep outside. At ten o'clock the shop is closed, but it takes about twenty minutes to put various things in order, so that the assistants cannot get out for exercise and recreation before 10.20 at night, and they must be back in their bedrooms by eleven o'clock. There is no time for reading or self-culture; it means practically life from bed to the counter and from the counter back to bed. On Sunday mornings only can they indulge in a more lengthy rest; but even on Sundays they are all obliged to turn out of the bedrooms by 10.30 A.M., and those who have no friends or family to visit spend a wretched holy day. They are not allowed to go to their room, and if they were there is no fire or furniture; they cannot sit, read, or otherwise rest and amuse themselves. They must go out whether the weather be fair or foul. This is no solitary case. Shop assistants have no residence, no home, but merely a room at the top of the house—sometimes a mere attic,—where as many beds as possible are crammed in together. Here the shop assistant may throw himself wearily down and snatch a few hours' sleep; but this bare, fireless, overcrowded room is no home to him. Thus, on the Sunday, when the shop is closed he must go out somewhere, and if he has no friends to visit must wander listlessly about the streets or parks. These homeless wanderers may be noticed on Sunday in great numbers, especially in Regent's Park. On week days also, between ten and eleven at night, the shop assistant is frequently driven out into the streets. The shopkeeper lives on the premises with his family, and does not care for his assistant or assistants to come into the private part of the house before it is actually bedtime. Yet what sort of walk, exercise, or recreation can a shop assistant take between ten and eleven at night? It too often results, especially when the weather is not fine, in his seeking rest and refuge at the public-house bar. Nor are female shop assistants better accommodated so far as their sleeping rooms are concerned. It is not to be expected that petty tradesmen should possess any special knowledge of the laws of health. Ignorance, indifference, or motives of economy lead them to set such considerations at defiance. One case was mentioned to us of a draper who was alleged to have screwed down the window of the room where his female assistants sleep. Presumably he feared that his assistants might communicate from the window with persons outside; but the result is that the room is never aired, and in the event of a fire the girls could not escape. Another case was brought to our notice of a girl, an apprentice, who was discharged from a draper's shop because her health had broken down. She is only eighteen years old, and maintains that, if her health has failed her, it is in consequence of the insufficient food and bad treatment she received. The sheets of her bed, she declared, were only changed once in three months, and the charwoman who works on the premises corroborated this information. Even worse than all this, shop assistants sometimes have no bedrooms at all, but are expected to sleep in the shop under the counter. This is especially the case in pawnbrokers' shops. One assistant assured us that he had slept for seven years under the counter of a pawnbroker's shop. He had served, to use his own expression, "as a cheap shop dog." But though apparently a strongly built man, his health had finally given way. The crowd of people, the flare of gas, the impossibility of thoroughly renewing the air in the pawnshop, had at last told on his constitution, and, acting under medical advice, he was ultimately induced to leave this pawnbroker's shop and seek employment where it would be possible to sleep in more wholesome quarters.

Such are some of the grievances which the shop assistants have borne with much patience for too long, and our list is far from exhausted. As yet we have only described what shop assistants with whom we have personally come in contact have endured. Even though these may be qualified as altogether exceptional cases, they have remained for years undetected and undisturbed. Exceptional such abuses may be, but what is there to prevent them becoming more general? In taking up, however, evidence other than that which we ourselves have gathered, we find that many of the abuses to which we have alluded are far from exceptional. It remains for us therefore to deal with the question in a more general sense, and then to examine what little has been done to improve the condition of shop assistants, notably the providing of seats and the

movement for early closing. Finally, we may be tempted to consider what further remedial measures naturally suggest themselves.

(To be continued.)

THE FINANCES OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THEIR RELATION TO THE REFORM OF THE COLLEGE.

IN the struggles and debates at the Royal College of Surgeons of England neither the Fellows nor the Members have made sufficient use of the materials for argument which may be derived from the tables of income and expenditure published annually in the Calendar of the College. Beyond casual references to the large sums expended in bricks and mortar, the handsome emoluments of examiners elected out of the body which distributes the revenue of the institution, the injustice of excluding altogether from power or influence the very persons to whom the College is indebted for its existence and prosperity, and a stray resolution to the effect that the Fellows and Members ought to be consulted in regard to any extraordinary expenditure, we cannot recall anything approaching to effective criticism. And yet we believe that a close examination into the present condition of the income and expenditure of the College—which it is the business and duty of the Fellows and Members to watch, and, if possible, to control—will furnish one of the most effectual weapons ever placed in the hands of the friends of reform and of a liberal constitution, and, if properly utilised, will effectually prevent the continuance and augmentation of the power at present wielded by the Council of the College. As we cannot pretend to deal exhaustively with this subject within the limits of a single article, we shall direct attention to the salient features of the financial position and show how they support the principles of constitutional reform which have again and again been urged upon the attention of the Council of the College.

1. It must impress itself strongly on all who inspect the balance-sheets how large a revenue is annually administered by the Council, large both absolutely in itself and relatively to that at the command of similar institutions where a far more liberal constitution prevails. In 1890–91 the total income of the College amounted to no less a sum than £27,174. We have not the material before us for making any close comparison between the College of Surgeons of England and the other professional Colleges, as the balance sheets of the latter are not readily accessible; but, judging by returns furnished a few years ago, it may be concluded, we believe with a fair approach to accuracy, that the income of the Royal College of Surgeons of England varies from about nine times to two and a half times as much as that of the other Colleges.

2. On comparing the income of the College for 1890–91 with that of preceding years, a considerable increase will be observed. Ten years previously—viz., in 1881–82—the income was £18,578, or £8596 less than in 1890–91. Part of the increase is due to the larger receipts from the Membership examinations, for in 1881–82 the receipts from this source were £13,191, and in 1890–91 £17,122. In the intervening years the receipts fluctuated considerably, owing chiefly to the introduction and working of the Conjoint Examining Scheme. The most fruitful year of the decade was 1886–87, when the receipts from the Members' examinations rose as high as £20,977. The whole of this large sum was derived from the strictly professional examinations, for the Preliminary examination conducted by the College, which used to yield about £700 per annum, was discontinued in 1881–82. The rest of the increase of income has been due to the Erasmus Wilson bequest. The stock dividends from this source accrued in 1887–88, and in 1890–91 amounted to £5438.

3. It is a very striking fact, and one of the utmost importance for the reformer to note, that not far short of £20 000 out of the £27,174 of the income of the College in 1890–91 were derived from the professional examinations. The exact sum was £19 393 17*s.* 6*d.*, comprised of £17,122 17*s.* 6*d.* from the Members' examinations, £1835 from the Fellows' examinations, and £411 from the Dental examinations. Thus the receipts from the Members' examinations were more than nine times as great as those from the Fellows' examinations. For a strict and fair comparison, however, between the receipts from the Members and the receipts from the Fellows, it would be necessary to deduct from the £17 000 received from the Members' examinations the sums paid by those who subsequently obtain the Fellowship, and to add this to the receipts from the Fellows' examinations. This adjustment would lessen the disproportion between the two sources of income, but would scarcely make the receipts from the Fellows amount to more than one fifth or one-sixth of the receipts from the Members of the College.

4. It may not be generally known that nearly all the fees derived from the candidates for the Fellowship examination are absorbed in expenses. On the first Fellowship examination there is a surplus, but the final Fellowship examination entails no inconsiderable loss to the College, the balance being barely redressed when the surplus from the first examination is set off against the deficit on the final. The result is that the receipts from the Fellowship examinations contribute little towards the maintenance of the College establishment. How much the Members contribute was most forcibly shown a few years ago by Mr. Erichsen in a well-remembered speech at the College, afterwards published as a pamphlet, composed, curiously enough, to prove that the Members ought to be excluded from a share in the government of the College. Mr. Erichsen said that "the fees paid by the Members sufficed, not only to pay the Board and Court of Examiners, to buy the diploma stamps, to defray at least two thirds of the working expenses of the College, mainly due to the requirements of the examinations, and nearly the whole of the cost of maintaining the museum and library, but to leave a balance of £6000, out of which pensions and various other collegiate expenses were paid. Out of each diploma fee of 20 guineas 6 or 7 guineas went into the coffers of the College."

The foregoing remarks concern the income of the College. We turn now to the expenditure. The most noteworthy points in regard to the expenditure are these:—

5. The whole of the income is absorbed by the expenditure. There is no margin. Neither last year, 1890–91, nor for several years, has there been any fresh investment out of the income of the College. The expenditure, ordinary and extraordinary, has both diminished capital, and has more than swallowed up the interest on the Erasmus Wilson stocks.

6. The Examiners of the College received about one-third of the income for 1890–91. They divided between them as nearly as possible £9000. The percentage proportion of examiners' fees to receipts works out to about 42 in the case of the Members' examinations, and to about 82 in the case of the Fellows' examinations. For the benefit of the examiners there is a capitation fee on each candidate examined, whether accepted or rejected, so that a rejected candidate may involve a loss to the College, but not to the examiners.

7. The working expenses of the examinations exclusive of examiners may be reckoned as not less than 20 per cent. Hence there would be a balance of between 30 and 40 per cent. on Members' fees available for the general expenses of the College, but on the Fellows' fees little if any.

8. During the last few years three new sources of expense have been opened—the Examination Hall and the laboratories on the Embankment, and the enlargement of the College by the addition of new museums &c. In ten years more than £62 000 have been expended on bricks and mortar and buildings generally. In 1890–91 the proportion of expenses paid by the College for the Examination Hall was £4274 12*s.* 4*d.*, and the laboratories cost £1434; but, as £761 were expended on furniture and fittings, the annual cost for the future may be reckoned as less than £1000. We have no means of estimating accurately the additional expenditure caused by the new buildings at the College itself, but the whole cost of maintaining the three new establishments may be put down in round numbers at £6000 annually.

9. If the receipts from examinations and trust funds are set aside, and regard paid only to the fixed income and necessary expenditure, there is a considerable annual deficit. The fixed income of the College from rents and stock amounted in 1890–91 to £6807 7*s.* 3*d.*, and the necessary expenditure—i.e., the expenditure for maintenance of the establishment—was about £9500. In other words, there was

a deficit under the present administration of the College of nearly £2700. The deficit is likely to be greater this year, for there is a debt of £11,000 under existing contracts, and this must be met by a fresh sale of stock, which will still further diminish the fixed income. The receipts from house property have been recently reduced by more than one half—viz., from £1500 to £700—in consequence of the demolition of houses to admit of the enlargement of the College; but it is only fair to state that No. 44, Lincoln's-inn-fields had been purchased five years previously, and this brought £500 a year into the College coffers. It has now gone, however, with a great deal more of the capital, and at the present rate of expenditure the whole of the capital will disappear in a few years.

10. Of the £9000 devoted to the payment of examiners, about £5500 are distributed among the ten fortunate members of the Court of Examiners, and of this £5500 seven-tenths, or £3850, replenish the pockets of seven members.

The conclusions which we draw from the foregoing facts are these:—

1. £27,000 a year and upwards is a very large sum for a corporation to receive and expend, and for a Council of twenty-four persons only out of 16,000 to claim and exercise the right of expending it, as well as of disposing of the capital belonging to the corporation, without submitting their stewardship to the Fellows and Members who constitute the corporation for unfettered and open criticism is an anachronism at the end of the nineteenth century.

2. The enormous preponderance of the contributions of the Members of the College over those of the Fellows, and the fact that from Members' fees alone is derived money for defraying the working expenses of the institution, show the absolute injustice of excluding the Members from any share in the government and in the election of the Council. Let it be noted that the cost of maintenance of the Examination Hall and laboratories—new sources of expenditure—equals the new source of income, the dividends from the Erasmus Wilson stocks, so that without the Members' fees the College itself could not be maintained.

3. To have expended £73,000 on buildings in a few years without the sanction of the Fellows and Members is morally at least an abuse of power, whether the money has been rightly and judiciously expended or not. It is true that there is nothing in the Charters to prevent this, and the Council have acted strictly within the letter of the law. The Charters, however, on which the present constitution is based are from nearly a hundred to fifty years old, and from recent experience it appears that the Privy Council will not act in opposition to the governing body of a corporation in amending Charters, whatever may be the weight of evidence and argument adduced in favour of the desired amendments. And yet if a Charter had now to be granted for the first time, it would scarcely be framed in so illiberal a spirit. All the circumstances have changed. The College has grown into a rich corporation, and has attained an importance which it did not possess a hundred or even fifty years ago. If all the facts could be laid before Parliament and thoroughly investigated and mastered by the members, there can be little doubt that large concessions would be made to the Fellows and Members, and some check be imposed upon the autocracy of the Council.

4. The present expenditure at the College ought to be reduced so as to ensure a margin sufficient to admit of a substantial annual investment, for the purpose of bringing up the fixed income to a level with necessary expenditure. Instead of being paid out of capitation fees, fixed salaries should be given to the examiners, and these should be calculated after due allowance had been made for meeting the necessary expenditure and providing a surplus for investment. Whilst cordially endorsing the view that examiners should be well paid for their services, we think that the work could be well done for £300 a year, and there would be no lack of thoroughly competent candidates for the appointments.

SCOTTISH UNIVERSITIES' COMMISSION.

A FEW days ago Ordinance No. 16 (Edinburgh, No. 1 Regulations for Degrees in Medicine) was issued. Its permanent form is more satisfactory than its draft form was. Four degrees in medicine and surgery are to be conferred by the University—viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). After dealing with the preliminary examination, the general lines of which are much the same as those at present in operation, it proceeds to regulate professional education. Of the five years devoted to professional study, during at least three of them hospital practice is compulsory, and during the fifth year candidates must be engaged in clinical study for nine months. Not less than nine months' attendance on clinical surgery and clinical medicine are made compulsory, as against six months, which is the present arrangement. Practical pharmacy, to which such prominence was given in the draft ordinance, and regarding which there was almost unanimous disapproval expressed, save by those specially interested in the teaching of the subject, has been reduced to its proper place, twenty-five meetings of a practical pharmacy class or three months' dispensing in a hospital or dispensary, or in an establishment recognised by the Pharmaceutical Society, being now all that is required. Candidates must have acted as clerk in the medical house and dresser in the surgical wards, and they must have availed themselves, to such an extent as may be required by the Senatus, with the approval of the University Court, of opportunities of studying at a hospital or dispensary, post-mortem examinations, fevers, diseases of children, ophthalmology, or such other special departments as may from time to time be determined. A course of instruction in mental diseases has also been made compulsory. An important modification of the present system has been made possible by its being made the duty of the professors and lecturers to submit to the Senatus annually a scheme specifying what proportion of the courses should be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively, and the Senatus shall transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval. At present the statutory regulation is that 100 lectures must be delivered to constitute a winter course.

The professional examinations are to be four in number—viz. (1) botany, zoology, physics, and chemistry; (2) anatomy, physiology, and materia medica and therapeutics; (3) pathology, and medical jurisprudence and public health; (4) surgery and clinical surgery, practice of medicine and clinical medicine, and midwifery. For the first group candidates may present themselves at the first examination held after they have attended a complete course. The second examination comes off at the end of the third winter session, the third at the end of the fourth winter session, and the final at the end of the fifth year of study. The result of the arrangement will probably be that students will devote too much of their energy during the fourth year to these subjects. For the degrees of Doctor of Medicine and Master in Surgery a special examination has been instituted in addition to the presentation of a thesis.

Ordinance No. 12 (General, No. 7, Regulations for Degrees in Science) was issued at the same time. As regards degrees in pure science, it is ordained that there shall be a first science examination in (1) mathematics or biology (i.e., zoology and botany); (2) natural philosophy; (3) chemistry; and a second examination in any three or more of the following:—Mathematics, natural philosophy, astronomy, chemistry, human anatomy (including anthropology), physiology, geology (including mineralogy), zoology (including comparative anatomy), botany (including vegetable physiology). Provision is also made for the establishment of degrees in applied science by the University Court in each University.

UNIVERSITY RIOTS IN ITALY.

A MORAL cyclone has agitated the groves of the Italian Academa. Beginning at the University of Naples, where a law professor inflicted personal chastisement on a contumacious student, the disturbance has involved the whole academic life of Italy, till not a single seat of learning from Turin to Palermo, from Padua to Cagliari, has escaped. So wide has the chasm between professors and students become that in the majority of the schools all work has been suspended, and the time that should have been devoted to tuition on the one hand and to classes on the other has been filled by indignation meetings of the insubordinate youths

and deliberative councils of the offended professoriate. For two months this state of things has prevailed, and there seemed little prospect of its calming down. The students, on their side, complain of the severity of the regulations they have to observe, the unyielding spirit of the University authorities in the matter of attendance and of examination, the summary way in which they are "remitted to their studies," and the consequent loss of time they incur before graduation and the commencement of professional practice. The professors, with more justice, insist on obedience to the traditional University system; on the fatal results of relaxed discipline and the lowering of professional qualification; and, above all, on the necessity of initiating such reforms as may be called for in a rational and regular way. There can be no doubt that the professors are in the right, though some of them may have lost temper and furnished the students with a too welcome excuse for continued agitation. The Minister of Public Instruction (Signor Villari) has, under great provocation, acted with judgment, if not at first with much energy—deterred, no doubt, from taking severer measures by the well-known sympathy the students can always count upon from the Extreme Left of the Italian Chamber. And here lies the explanation of a good deal of the difficulty under which academic life in Italy labours. All Italian students are more or less politicians. The generation which contributed to the unity and independence of the kingdom still gives the tone to young Italy. Commemorations of patriotic deeds and of patriotic heroes recur at intervals so frequent that the country is never for more than a few weeks at a time allowed to forget the revolution under which it rose to freedom and power, and those periodical *feste* appeal with peculiar effect to the academic youth. Studies are suspended on such occasions for mental stimulus of a far less wholesome kind, and the desire to shine as a "patriotic orator" overrides the soberer ambition to excel in academic work. Brought into the closest contact with the "party of action" and its leaders, the students regard these as their special friends, whose applause they are more eager to win than that of their teachers and professors. It is significant in this connexion to read that the disturbances of the last few months have been started and kept up by a few ringleaders in each University—ringleaders whose demagogic abilities and achievements have won them the sympathy of politicians of the Extreme Left. These youths are confident of the support they will have in the Chamber of Deputies should their conduct come up for consideration before that body; hence the spirit of impunity they manifest, and hence the reluctance of the Minister to court a collision in Parliament. That reluctance, however, Signor Villari seems now to have overcome; while the summary example made of three of the students in the Roman University, though for the moment it has been followed by fresh acts of insubordination and violence, cannot but have a salutary effect. The better class of the academic youth are now venturing to assert themselves, and in some cases are coöperating with their professors in restoring order for the resumption of study. Attempts to "boycott" them (for such tactics have found their way into University life) are being successfully resisted, and ere long we hope to hear of a vigorous combination of the healthier and manlier constituents of the schools for the vindication of what are, after all, their higher interests. The weakness of Signor Villari's predecessors themselves, tainted with the demagogic spirit, is blamed for the growth of the insubordination now so unhappily prevalent—their too great indulgence of political extravagance among the students having borne its inevitable fruits. But, to judge from the Italian press of all party shades, except that of the Extreme Left, public opinion is seconding the enlightened Minister in supporting the University authorities; while the Government, now that it is appealed to, have but to show an unyielding front to put an end to disturbances which must throw back the higher education of Italy for years, unless vigorously and relentlessly put down.

SYDNEY HOSPITAL.—A radical mode of dealing with doubtful hospital buildings has been undertaken by the authorities of the Sydney Hospital. The wooden buildings at present in use are to be destroyed by fire, and the sum of £25,000 is to be devoted to improving and extending the hospital premises.

FOOT-AND-MOUTH DISEASE.

SODIUM DITHIOSALICYLATE (NOS. 1 AND 2 DITHION) AS A REMEDY.

THE increase in the epidemic of foot-and-mouth disease, and the enormous loss it entails either upon the farmer or upon the local rates, give very great interest to the observations of Dr. Renner, district veterinary surgeon, Dieburg, which have been published in a recent number of the *Berliner Thieraerztlichen Wochenschrift*. He states that, during an extensive outbreak of foot-and-mouth disease in 1890 and 1891, he employed the two dithion preparations with great success. At first they were used externally only, those parts of the animals where pustules had formed and inflammatory processes set in—the mouths, udders, feet, and hoofs—being painted every three hours with a 2½ to 5 per cent. solution, washed and bandaged. He found that the pustules disappeared so rapidly that in two or three days a perfect cure was obtained. Cracking of the nipples or scaling of the udders was rare, the solution acting as an aseptic varnish to all wounded places. Malignant suppuration or loss of the hoofs—sequelæ which often necessitate slaughtering the animals—did not occur in animals treated in this way.

Professor Rosenbach of Breslau having reported favourably upon the internal employment of dithions, Dr. Renner repeated his experiments and found that ruminants were thus mostly protected against the disease, while those attacked rapidly recovered without serious injury. In these experiments from 1 to 2 oz. daily were given internally in the food, and 2½ to 5 per cent. solutions were applied externally. Details are given of the many occasions upon which this plan of treatment was followed, and Dr. Renner points out that, although the chief objection to this treatment is the cost of the remedies, this is really insignificant when compared with the enormous loss which is thus saved. A dithion compound has been now prepared at nearly one-fourth of the original price, and this has been used by Dr. Renner in two places with similar satisfactory results. To make certain of its efficacy numerous healthy animals were intentionally inoculated, and under this treatment they passed through the disease and recovered in about twelve days. Dr. Renner considers that he has proved that dithion, if used early, protects from the foot-and-mouth disease, that it diminishes its intensity when it has already broken out, and that it reduces the losses and restricts the attack to the affected herd. These conclusions have subsequently been supported by a farmer, who spoke enthusiastically of the benefits obtained from dissolving the preparation in the form of a powder in water, and using part of the solution to wash the mouths, hoofs, and udders of the sick animals, while the greater portion was mixed with the drink and was readily taken.

The present is an opportune moment for the publication of these observations, since, if they are confirmed, they will entail a great saving of animal life, and will thus largely rob the epidemic of its terrors.

THE MEDICAL DEFENCE UNION.

THE annual meeting of the Association was held on Wednesday, at 20, Hanover-square. There was a large attendance of members. The chair was occupied by the President, Mr. Lawson Tait. In submitting the report, Mr. Tait pointed out that no record of work done could be more satisfactory. Every conceivable kind of difficulty that could arise in the life of individual medical practitioners had been met, and a satisfactory issue arrived at. The society, existing as it did for purely fighting purposes, had never lost a case it had taken in hand. The report proved the absolute need of such an institution. Many men had been hardly used by reason of their inability to help themselves, and the report recorded a large number of successful cases which showed that the evils incidental to medical men had not been misrepresented either in degree or in kind. The cases which had occurred in Sunderland would illustrate that statement. The machinery existed whereby designing people could now be brought to justice, and other

malicious persons put on their guard lest they should meet a similar fate. In many instances charges of a ruinous character had been settled by as many postage stamps as the charge itself involved. The items of the report showed that the expenditure had been extremely small, and the balance in hand was large enough to enable the society to fight a reasonably large suit without calling upon their guarantee fund. Any serious expenditure of money would be involved only when cases of fresh difficulty occurred. The moral weight of a large body of members of the profession united together with an honest, legitimate, and determined purpose would have more effect than any amount of litigation. The report and the treasurer's accounts were adopted unanimously. Under the new Articles of Association an executive council of twelve members was nominated and appointed. The President considered that the more narrowly the work was confined to the protection of the individual practitioner the more successful the Union would be. There already existed power enough for political agitation, and it would be impossible for those who had taken any energetic part in the work of the Association to agree to anything by which its success would be weakened. The actual state of the law made it necessary to act on the lines of a limited company. Any departure from these lines might, in any given case, render the Society liable to be surcharged with costs of both sides. They had to move with the greatest care, and it was for these reasons that the reconstruction of the machinery had become necessary, and had been accomplished. The twelve elected members were to constitute a nucleus. Continuity of action would be secured by electing three members yearly. The members did not want any cataclysmic upsetting of the Union, and if they were at any time dissatisfied with the conduct of the Council a vote of censure would, according to the usual method, secure the immediate resignation of all its members.

Dr. Bridgewater nominated Dr. Masters, Dr. Campbell Pope. Dr. Felce, Dr. Danford Thomas, Dr. Bantock, Dr. Bateman, Mr. Lawson Tait, Mr. Justin McCarthy, Dr. Barling, Mr. Messiter, Dr. Hallwright, and Dr. Leslie Phillips. This Council was unanimously appointed.

THE LATE SIR PROVO WALLIS, G.C.B.

THE great age (100 years and ten months) attained by this distinguished naval officer, together with his world-wide reputation as the hero of the *Shannon-Chesapeake* sea-fight, may give some interest to the following notes of his health from December, 1890, to the time of his death, with which we have been supplied through the kindness of Mr. L. E. W. Stephens, his medical attendant.

On Dec. 6th, 1890, in the afternoon, I was called for the first time to Sir Provo Wallis. I found him in bed clothed in an ordinary longcloth nightshirt, a linen nightcap, linen sheets to the bed, and no fire in the room. He complained chiefly of discomfort with waterbrash after meals, for which lactopeptine powders were prescribed with great benefit. He was unable to lie straight in bed, but was lying on his right side with his knees semi-flexed, elbows flexed, and forearms folded across the chest. Movement of the legs fairly good, movement of arms limited, so that he could only just raise himself on his elbows. There was no paralysis, only wasting of muscles from disuse. Over each great trochanter was an oval bedsore 2½ by 2 in., in process of healing. Micturition was frequent, painful, and uncertain. Hands and feet cold. Pulse 70, with occasional intermission, the left pulse being much weaker than the right. Temperature 97°. Mental condition and memory very good. No teeth; tongue clear; eyesight good; slightly deaf. Heart and lungs normal. Urine occasionally ammoniacal, with deposit of muco-pus. Bowels costive, so that about every fourth day greater effort was required in defecation. Much troubled with pruritus. To relieve these troubles a fire was ordered in the bedroom to raise the temperature gradually from 38° or 40° to between 50° and 60°. The patient was placed on a water-bed filled with warm water, and by degrees was clothed in flannel and placed between blankets, all of which met with sturdy opposition from the patient. Catheterisation, when suggested, was firmly declined. By careful dressing the bedsores soon healed, and the skin remained sound for months. With copious draughts of lithia water the cystitis cleared up. During February and March, 1891, visits were made on alternate days. In April, May, and June a weekly visit sufficed.

In November the same helpless condition existed, and a distaste for food gradually came on, with secretion of very tenacious mucus from the pharynx during deglutition. The efforts required to expel this mucus caused great distress and exhaustion. In December occurred a blocking of the rectum with hard, smooth, round scybala difficult of removal. The bowel was cleared out every fourth day. Towards the end of December the patient would frequently take no food from 7.30 one morning until the following day at the same hour. This meal consisted of a pint of cocoa and milk, with rusks soaked in it. The cicatrices of the bedsores broke down into a number of small round wounds. Lastly, gangrene set in on Feb. 9th, terminating painlessly and fatally on Feb. 13th.

THE BRITISH INSTITUTE OF PUBLIC HEALTH.

THIS is an Association of medical men possessing registrable qualifications in State medicine, public health, or sanitary science, medical officers of health, and others. The Council of the Public Health Medical Society have been successful in obtaining incorporation by special licence of the Board of Trade under the above title, with the object of aiding theoretical and practical investigations and study of all branches of public health medicine. They will also hold meetings, congresses, institute lectures, and demonstrations; they propose to issue publications of the Transactions of the Association, to found a library, and to publish a journal. Among other objects which the Association has in view is the examination of candidates, either alone or in conjunction with one or more kindred bodies, and the granting of certificates of proficiency as sanitary inspectors. The members of the Institute consist of fellows, ordinary members, and associates, and it is provided that the first fellows of the Institute shall consist of the present members of the Public Health Medical Society, or such of them as elect to become such; all subsequent fellowships being conferred by the Council upon such persons as possess a registrable qualification in sanitary science, public health, or State medicine, in accordance with the Medical Act, 1886, Section 21. The Council are taking immediate steps to found branches in each division of the kingdom.

The articles and memorandum of association were signed by Dr. Littlejohn (Edinburgh), Dr. Grimshaw (Registrar-General for Ireland), Dr. Meymott Tidy, Dr. Mumby (Portsmouth), Sir Charles Cameron, Sir Douglas Maclagan, Dr. W. R. Smith, and Dr. Francis Allan.

CONCERNING THE PROPOSED GRESHAM UNIVERSITY.

THE following statement has been forwarded to every member of Parliament:—

SIR,—The Medical Schools of London, which include some 300 teachers and 2000 students, have united with University College, London, and King's College, London, in efforts to obtain the Charter for the Gresham University, now on the table of the House. They venture to ask for your support in Parliament because they believe that this University will be of the greatest advantage to students and teachers in London, in that it will tend to develop in every way the exceptional means of instruction afforded by the metropolis. This remark applies especially to Medicine, in which the opportunities of study must, from obvious causes, be greater than in any other city.

It is the desire of the supporters of the Charter, including all the medical schools, to have in London a local university which shall give its students all those academical advantages in learning and graduation which already exist in the Universities of Oxford, Cambridge, Edinburgh, Aberdeen, and Glasgow.

It has been objected in a statement circulated by the Victoria University that Gresham degrees may be given too easily, especially in respect of the standard of scientific attainment. On the part of the London Medical Schools—and we know it to be equally true of the other faculties—we can assert that nothing of the kind is contemplated. We are not less aware than the authorities of other medical schools of the importance in medical education of a good groundwork in arts and science. The education given by us is, we believe, as thorough as any

in Europe, and the degree will represent that education, together with examinations, which will not seek to attract students by their inferiority. The whole body of the medical teachers of London, containing as it does a large proportion of the most distinguished physicians, surgeons, and teachers of science in the United Kingdom, may surely be accorded the trust given to the teachers in universities elsewhere.

Some of the details of the statement of the Victoria University are inaccurate, and on other points—as to the intentions of the proposed University—mere assumptions are put forward.

It is not true that Medicine is paramount upon the Governing Body of the University, or that it has a larger representation than is required by the numerical strength of the Faculty and the variety of circumstances in the Teaching Institutions. The Council will consist of at least forty members, of whom not more than fourteen will certainly be, and not more than sixteen are likely to be, representatives of Medicine. Of the interests of science the constitution of the University supplies a special guarantee in the organisation of the teachers by Faculties, not by Institutions, as in the Victoria University.

The statement circulated by the Schools of Medicine in Birmingham, Bristol, and Sheffield repeats the arguments, and closely follows the lines of that put forward by the Victoria University. Any attempt on the part of these schools to obtain for themselves the advantage of association in a Teaching University will have our sympathy, but it would be a great injustice that in the meantime London should be refused this privilege.

The Charter of the Gresham University grants what we have for many years endeavoured to obtain, and, in the interests of medical education in London, we earnestly hope that the University may be established on this basis.

We are, Sir, your faithful servants,

STANLEY BOYD,*
For the Charing-cross Hospital Medical School, a College (designate) in the University.

FREDERICK TAYLOR,
For the Guy's Hospital Medical School, a College (designate) in the University.

JOHN CURNOW,
For the Faculty of Medicine of King's College, London, a College (designate) in the University.

JEREMIAH McCARTHY,
For the London Hospital Medical School, a College (designate) in the University.

SIDNEY COUPLAND,
For the Middlesex Hospital Medical School, a College (designate) in the University.

NORMAN MOORE,
For the St. Bartholomew's Hospital and College Medical School, a College (designate) in the University.

THOMAS WHIPHAM,
For the St. George's Hospital Medical School, a College (designate) in the University.

HERBERT PAGE,
For the St. Mary's Hospital Medical School, a College (designate) in the University.

E. NETTLESHIP,
For the St. Thomas's Hospital Medical School, a College (designate) in the University.

MARCUS BECK,
For the Faculty of Medicine of University College, London, a College (designate) in the University.

E. GARRETT ANDERSON,
For the London School of Medicine for Women, a College (designate) in the University.

* Hon. Sec. to the Committee of the Delegates of the Metropolitan Medical Schools.

Feb. 17th, 1892.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5137 births and 4125 deaths were registered during the week ending Feb. 20th. The annual rate of mortality in these towns, which had declined in the preceding four weeks from 35·4 to 23·1 per 1000, further fell last week to 21·1. In London the rate was 20·7 per 1000, while it averaged 21·4 in the thirty-two provincial towns. The lowest rates in these towns last week were 13·0 in Derby, 15·5 in Bradford, 15·7 in Sunderland, and 16·9 in Wolverhampton; the highest rates were 26·4 in Oldham, 26·5 in Burnley, 27·7 in Blackburn, and 28·2 in Preston. The 4125 deaths included 383, which were referred to the principal zymotic diseases, against numbers declining from 604 to 386 in the preceding five weeks; of these, 177 resulted from whooping-cough, 86 from measles, 48 from diarrhœa, 29 from diphtheria, 23 from scarlet fever, 18 from "fever" (principally enteric), and two from small-pox. No fatal case of any of these diseases was registered either in Plymouth or in Hull; in the other towns the lowest zymotic death-rates were recorded in Brighton, Croydon, and Derby, and the highest in Liverpool, Burnley, Cardiff, and Blackburn. The greatest mortality from measles occurred in Liverpool, Swansea, Norwich, and Sunderland; from scarlet fever in Cardiff; from whooping-cough in London, West Ham, Manchester, Burnley, Sheffield, and Bristol; from "fever" in Blackburn; and from diarrhœa in Nottingham, Preston, and Blackburn. The 29 deaths from diphtheria included 15 in London, 3 in West Ham, 2 in Manchester, and 2 in Sheffield. One fatal case of small-pox was recorded in Liverpool and one in Oldham, but not one in any other of the 33 large towns; 7 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 1 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1116, against numbers declining from 1397 to 1244 at the end of the preceding four weeks; 82 new cases were admitted during the week, against 100 and 117 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 1465 to 560 in the preceding four weeks, further fell last week to 450, and were 46 below the corrected average. The causes of 96, or 2·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Portsmouth, Oldham, Sunderland, and in four other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Bolton, Salford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding four weeks from 27·2 to 20·8 per 1000, further fell to 20·1 during the week ending Feb. 20th, and was 1·1 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·8 in Paisley and 17·1 in Edinburgh to 21·5 in Glasgow and 23·1 in Greenock. The 559 deaths in these towns included 15 which were referred to whooping-cough, 13 to diarrhœa, 10 to "fever," 9 to measles, 8 to diphtheria, 7 to scarlet fever, and not one to small-pox. In all, 62 deaths resulted from these principal zymotic diseases, against 55 and 46 in the preceding two weeks. These 62 deaths were equal to an annual rate of 2·2 per 1000, which was slightly above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 16 to 22 in the preceding three weeks, declined last week to 15, of which 10 occurred in Glasgow and 2 in Paisley. The 13 deaths from diarrhœa showed a further increase upon recent weekly numbers, and included 6 in Glasgow. The fatal cases of "fever," which had been 8 and 3 in the previous two weeks, rose again last week to 10, of which 6 occurred in Glasgow. Of the 9 deaths referred to measles, 5 were recorded in Glasgow and 4 in Edinburgh; and of the 8 fatal cases of diphtheria, 3 occurred in Glasgow and 2 in Aberdeen. The 7 deaths from scarlet fever showed a further increase upon recent weekly numbers, and included 5 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had declined in the preceding four weeks from 230 to 146, rose again last week to 154, and exceeded by 14 the number in the corresponding week of last year. The causes of 56, or 10 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the four preceding weeks from 54·1 to 31·8 per 1000, rose again to 37·4 during the week ending Feb. 20th. During the first seven weeks of the current quarter the death-rate in the city averaged 39·6 per 1000, against 33·7 in London and 20·3 in Edinburgh. The 251 deaths in Dublin during the week under notice showed an increase of 38 upon the number in the preceding week, and included 4 which were referred to diarrhœa, 3 to measles, 3 to whooping-cough, 2 to scarlet fever, 1 to enteric fever, and not one either to small-pox or diphtheria. In all, 13 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1·9 per 1000, the zymotic rate for the same period being 2·4 in London and 2·2 in Edinburgh. The fatal cases of whooping-cough, which had been 2 and 3 in the preceding two weeks, were again 3 last week. The 3 deaths referred to measles exceeded the number in any recent week, and the 2 fatal cases of scarlet fever were the first recorded within the city since October last. The 251 deaths in Dublin last week included 39 of infants under one year of age, and 78 of persons aged

upwards of sixty years; the deaths both of infants and of elderly persons showed an increase upon the numbers recorded in recent weeks. Three inquest cases and 4 deaths from violence were registered; and 102, or 40 per cent., of the deaths occurred in public institutions. The causes of 20, or 12 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

HER MAJESTY'S ARMY AND INDIAN MEDICAL SERVICES.

THE following are the questions set to candidates for the Military Medical Services at the recent examinations:—

Natural Sciences.—Zoology: 1. Refer to its sub-kingdom and class an animal with the following characters, and give examples:—Body with transverse segmentation; a ganglionated ventral chord; head, thorax, and abdomen distinctly separated; respiration by tracheæ. 2. What are the essential characters by which the *cœlenterata* are distinguished as a separate group of the animal kingdom? Give one or more examples of a cœlenterate animal. 3. Give (qualitatively) the composition of cellulose, and adduce from the animal kingdom some instance to show that cellulose is not as formerly supposed, exclusively confined to plants.—Botany: 4. Mention any instance known to you in the life history of a plant which illustrates the law of Alternation of Generations. 5. What are the principal substances which may be deposited in the walls of the vegetable cell so as to give it rigidity and increase its power of resisting organic decomposition? Cite some instances of plants in which cells so constituted occur. 6. Refer to its natural order a plant with the following characters, and give one or more examples:—Leaves alternate without stipules; calyx formed of two sepals which are caducous; corolla with four petals; stamens numerous, inserted on the receptacle; fruit a single-celled capsule with parietal placentæ; seeds numerous, with oily albumen.—Physics: 7. Explain the formation of dew. 8. State the evidence on which we affirm the former existence of glaciers in places where they are no longer to be found. 9. What is meant by the "Torricellian vacuum?" On what physical properties does the existence of this vacuum depend?

Anatomy and Physiology.—1. Describe the inferior maxillary bone, giving an account of the muscles, ligaments, and other parts of importance connected with it. 2. Describe the origin, course, distribution, and functions of the musculo-spiral nerve. 3. Describe the structure, anatomical relations, and functions of the large intestine. 4. Describe the origin, distribution, and communications of the portal vein; give an account also of the character and composition of the blood contained in it, and the office it performs in the animal economy. 5. Describe the structure, anatomical relations, and connexions of the peritoneum.

Medicine.—1. A case submitted for analysis and commentary. 2. Write what you know regarding the composition, mode of origin, the effects, the symptoms, and treatment of gall-stones and bile concretions. 3. Name the common intestinal worms found in man. State what you know as to how each of the parasites you name gets access to the body of man; the symptoms of the presence of each; and the treatment, curative and prophylactic, of each of them. 4. Write what you know regarding the differential diagnosis of facial-nerve paralysis. (Bell's Paralysis.) 5. Name the official preparations in the British Pharmacopœia which contain arsenious acid. State the amount of arsenic in each; and the doses of each. Describe the action of arsenic; and the symptoms which follow its use in extreme doses.

Chemistry.—1. Organic food substances may be divided into two classes—the nitrogenous and the non-nitrogenous. Give some examples of each of these classes. 2. What is the result of heating ammonium chloride with quicklime? Write down the equation which expresses the reactions in this process. 3. Write down in their order the formulæ of the series forming the marsh gas series, beginning with that of marsh gas and carrying it as far as five terms. Give in a formula the quantity by which each term of the series differs from its predecessor.

Surgery.—1. Describe the relative symptoms by which dislocation of the head of the femur, on the dorsum of the ilium, may be diagnosed from dislocation into the sciatic notch. Also describe the measures requisite to reduce each dislocation. 2. By what symptoms may an impacted fracture of the neck of the femur be diagnosed from either of the above-named dislocations? What treatment is best in such an injury? 3. What are the most common causes of inflammation of veins? Describe the effects of such inflammation when implicating one of the lower limbs; and the treatment to be pursued under its various stages. 4. Given a case of stone in the bladder. State under what conditions and circumstances would the operation of crushing—the lateral operation—or the supra pubic operation be preferable. 5. A man has a hard chancre of three or four weeks' duration. What treatment should be adopted in such a case? What are the probable results as regards secondary, or tertiary, complications? And, provided the patient is unmarried, what advice should be given as regards matrimony? 6. Describe the preliminary symptoms and subsequent progress of a case of senile gangrene. To what arterial changes is this form of gangrene generally due? And what is the best treatment to be adopted in the progress of such a case?

Brigade-Surgeon-Lieutenant-Colonel F. Howard has been appointed Principal Medical Officer, Belfast District.

ARMY MEDICAL STAFF.—Surgeon-Lieutenant-Colonel R. Drury has assumed charge of the Curragh Station Hospital; Surgeon-Captain W. E Hardy has been posted to the Station Hospital, Colchester; Surgeon-Captain M. O'Halloran has been transferred from Dover to Shorncliffe; Surgeon-Captain H. M. Sloggett has been posted to the Station Hospital, Gosport; Brigade-Surgeon-Lieutenant-Colonel C. A. Atkins has temporarily assumed the duties of Principal Medical Officer of the Western District, vice Surgeon-Colonel J. B. Hamilton, on leave; Brigade Surgeon-Lieutenant-Colonel Robert Collins, M.B, is placed on retired pay (dated Feb. 14th, 1892)

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeons: Edward Ferguson to the *Iron Duke*, and James O'B. Williams, M.D., to the *Assistance*, temporarily (both dated Feb. 25th, 1892). Surgeons: Matthew J. O'Regan, M.B., to the *Leander*, and Vidal G. Thorpe to the *Peacock* (both dated Feb. 25th, 1892); Edmund Corcoran to Bermuda Hospital, and James M. Rogers to Portsmouth Yard (both dated Feb. 22nd, 1892); Henry B. Beatty to the *Impregnable* (dated March 13th, 1892). Surgeon and Agent: Joseph E. Finegan, at Carlingford, Omeath, Greenore, and Giles Quay (dated Feb. 20th, 1892).

VOLUNTEER CORPS.—*Artillery:* 2nd East Riding of Yorkshire (Western Division, Royal Artillery): Albert Wilson, Gent., to be Surgeon-Lieutenant (dated Feb. 20th, 1892).—*Rifle:* Galloway: Norman James McKie, M.B., to be Surgeon-Lieutenant (dated Feb. 20th, 1892).—1st Volunteer Battalion, the East Lancashire Regiment: Surgeon-Major W. G. Court to be Surgeon-Lieutenant-Colonel (dated Feb 20th, 1892).—3rd Volunteer Battalion, the East Surrey Regiment: Surgeon-Captain W. A. F. Bateman to be Surgeon-Major (dated Feb. 20th, 1892).—1st Nottinghamshire (Robin Hood): Surgeon-Lieutenant L. W. Marshall, M.D., resigns his commission (dated Feb. 20th, 1892).

Correspondence.

"Audi alteram partem."

ASSOCIATION OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS: STEELE *v.* SAVORY.

To the Editors of THE LANCET.

SIRS,—It will be in the recollection of the readers of THE LANCET that in February, 1889, the Association of Members of the Royal College of Surgeons, acting under legal advice and through their committee, issued notices convening a meeting to be held at the College of Surgeons for the purpose of considering the situation of the Members of the College, and approving a draft Bill to be submitted to Parliament, providing for the reform of the constitution of the College. Upon the appearance of these notices the College authorities at once informed the secretaries of the Association that this meeting would not be permitted, and threatened them with the infliction of the penalties under By-law xvii. of the College. The Council furthermore intimated its intention to enforce penalties against each one of the body of Members who might attend such meeting. Nevertheless, the Members assembled, and, finding the doors of the College barred against them, at once adjourned to the Holborn Restaurant, and, acting under the advice of counsel, instructed their secretaries to take Chancery proceedings (Steele *v.* Savory) against the President and Council for the purpose of preventing an immediate enforcement of this oppressive by-law, and testing the validity of the same as to its legality or otherwise, and also for the purpose of asserting the ancient rights of the Members. The action was a "representative" one—that is to say, the secretaries and two other gentlemen who afterwards joined with them became plaintiffs on behalf of the Members of the College generally. The committee being advised by counsel that the action had every prospect of success, and acting at all times on the advice of their solicitor and counsel, the case proceeded. The result of the action is now widely known.[1] By the judgment of Mr. Justice Romer, By-law xvii., and indeed all other by-laws, were declared to be legal so long as they were made in accordance with the terms of the various charters under which the Council of the College claim authority to act. The suit therefore failed, and was dismissed with costs against the plaintiffs. Therefore a special committee has since been formed for the purpose of considering the position of the Association of Members and obtaining the means of meeting the liabilities incurred by the secretaries and members of the committee who were made parties to the suit.

The question of an appeal against the judgment of Mr. Justice Romer was proposed and carefully considered, and

[1] See THE LANCET, Jan. 30th, 1892.

after weighing counsel's opinion the committee determined that no further legal action should be taken. The eminent counsel consulted pointed out that "the validity of the power of expulsion does not prevent the by-law complained of being questioned in so far as it purports to impose restrictions upon meetings and discussions, and that the voluminous evidence collected by the plaintiffs shows the existence, in early times at all events, of the rights of the commonalty to be summoned to meet from time to time, and, when so met, of freely discussing all matters concerning the common craft." Counsel further expressed the opinion "that the evidence, however, tends to grow less distinct as time goes on, and that it is questionable whether these rights, though never in terms taken away, had not suffered largely from general encroachments by the governing body and fallen by lapse of time into disuse."

It is now the duty of the special committee to point out that the expenses of the action at law must be promptly met, so that the four nominal plaintiffs—Messrs. Warwick C. Steele, Wm. Ashton Ellis, Jabez Hogg, and W. G. Dickinson—may be speedily relieved from the responsible position in which the adverse judgment of Mr. Justice Romer places them. The committee, on behalf of the whole body of Members, fully realise and share the plaintiffs' responsibility, and, moreover, consider also that they have a strong moral claim upon the Members of the College generally, and they look with perfect confidence for a willing and substantial response to this appeal.

The exact amount of the costs has not yet been ascertained, but if the President and Council of the College press for their costs, then the committee have reason to believe that the whole will not be less than £2000. Be this as it may, the Members of the College will, we feel assured, not allow the plaintiffs to suffer, but by generous assistance testify to their courage and self-abnegation displayed in the important contest in which they have been engaged on their behalf.—Signed, on behalf of the Special Committee,

GEO. DANFORD THOMAS,
Chairman and Treasurer.

Feb. 22nd, 1892.

Subscriptions may either be sent direct to Dr. G. Danford Thomas, Park Lodge, Paddington, W., or to the National Bank, Bayswater Branch, W. (Steele *v.* Savory Fund).

DR. ROOSA'S TREATISE ON DISEASES OF THE EAR.

To the Editors of THE LANCET.

SIRS,—I crave permission to make a few remarks on your able review in THE LANCET of Feb. 20th on Dr. St. John Roosa's equally excellent book on "Diseases of the Ear." Your reviewer, no less than the author, has done good service in calling attention to "conclusions which are fearlessly stated," and which, when I read them, appeared to me almost as an echo of opinions which you permitted me to express in THE LANCET of July 6th, 1889, and April 11th, 1891. If the echoes of your reviewer are re-echoed by your journal from time to time until they reverberate sufficiently to reach the ears of the medical profession, and through their influence the ears of the public, you will, as you have been on former occasions, be the means of exposing and checking abuses that are harmful alike to the profession and the public. On the subject of electricity (*vide* review) the author in this edition omits certain paragraphs upon the value of electricity as a diagnostic agent, "which he now frankly confesses have not sufficient basis to be of practical utility." Now (*vide* THE LANCET, April 11th, 1891), "perhaps because tinnitus, due to degeneration and some other causes, is of a constant character, the kind of electricity which finds favour amongst its advocates is the constant current; but whether this or the interrupted is employed, it is generally the personally conducted and continuous as long as possible." Whether for diagnostic or curative purposes, the results are practically the same; so there is no advantage on dwelling upon the different reasons which prompt its employment.

Again (*vide* review): "He also gives us a plain opinion on the value of operations upon the tympanic membrane and ossicles in non-suppurative affections of the middle ear, and plainly hints at their experimental nature and generally disappointing results." Now, on incision of the tympanic membrane, with division of the tensor tympani (*vide* THE LANCET, July 6th, 1889): "Its history includes a flight of the imagination, a brief notoriety, and a burial in oblivion so rapid as falls to the lot of few achievements in surgery." Again (*vide* review): "Dr. Roosa speaks in condemnation of operations upon the nose in cases of deafness, and he shares in the opinion of some others that those who now enthusiastically adopt and advise these operations will in time relinquish them." Now (*vide* THE LANCET, April 11th, 1891), on removal of the middle turbinated bone: "As a surgical procedure this operation is outside the pale of serious discussion, and I mention it only as an example of a bubble remedy, that the very mention of it may possibly hasten its inevitable bursting."

I have not as yet had the opportunity of seeing this edition of Dr. Roosa's book, though I am familiar with previous editions, but I hope that he may have echoed what I have said on the subjects of so-called artificial ear-drums and the injections of pilocarpine. On the former (*vide* THE LANCET, April 11th, 1891): "Now practically any form of artificial membrane that is advocated presupposes that all perforations which require protection and pressure can have them usefully applied by one form, the fact being that each perforation requires management, to be acquired only by experience, after careful examination, and when any support of the kind is wanted it must be regulated by the patient, his sensations being the guide in regard to pressure." On the subject of injections of pilocarpine, which were some time ago revived in this country, I say nothing. Professor Politzer, who made the original experiments in 1879, disposed effectually of them in THE LANCET of Jan. 3rd, when he spoke of "practitioners who subject their patients to a long and wearisome course of treatment with pilocarpine," and added: "I feel it my duty to say that they are not too conscientious in the discharge of their calling" You will, Sirs, I feel sure, forgive me for occupying so much space in repeating, and so accentuating, these various points, when you reflect, as I hope you will be able to do ere long, that your journal has been mainly instrumental in putting limits at least, if not a full stop, to the employment of some useless remedies.

I am, Sirs, your obedient servant,

Savile-row, W., Feb. 22nd, 1892. W. B. DALBY.

LARYNGEAL AFFECTIONS AFTER INFLUENZA.

To the Editors of THE LANCET.

SIRS,—During an attack of influenza all the effects of catarrhal inflammation may be observed. Most of these effects are so frequently seen as to be familiar to all. There are, however, complications and sequelæ which are less common. Some patients have been attacked with œdema, coming on in some cases suddenly, in others insidiously. Hæmorrhages from the larynx have been more common and generally very slight. During convalescence ecchymoses and purpuric spots have been observed. Venous congestion, a rare affection in this locality, has been noticed. But the most interesting consequences are neuroses. The paralyses which may be seen in catarrhal laryngitis of course form the larger proportion of these neuroses; but this note is intended to draw attention to the sequelæ rather than the complications of influenza. Paralysis commencing in the throat after convalescence and extending to other regions has so precisely simulated that which follows diphtheria as to suggest a doubt as to the nature of the original attack. But other paralyses, more localised, have also come on after the patients had returned to their avocations. The most commonly affected muscles have been the crico-thyroidei laterales, the thyro-arytænoidei externi et interni, and the arytænoideus. Thus we get more or less paralysis of adduction, either single or double, with corresponding loss of voice. Almost as frequently the action of the thyro-arytænoidei interni and the crico-arytænoidei and crico-thyroidei is impaired or abolished; and as the last named is affected by the superior laryngeal nerve, neuroses of sensation as well as motility result. Anæsthesia and hyperæsthesia of the larynx have also been observed, but the extensive range of normal sensibility in different persons renders it difficult to demonstrate minor degrees of such deviations. Neuralgia is rare, and I have only met with one case following an attack of the present epidemic. I may mention among sequelæ setting in very late choreic movements and spasmodic affections, as well as the stammering of the vocal cords described by me in THE LANCET of Nov. 15th, 1879 These cases are rare. It would appear that these cases of late sequelæ are indications that the effects of influenza remain for a considerable period, and the proportion of

neuroses shows how profoundly the disease affects the nervous system.—I am, Sirs, yours truly,

PROSSER JAMES, M.D.

Deanery-street, Park-lane, Feb. 22nd, 1892.

FEES FOR NOTIFICATION.

To the Editors of THE LANCET.

SIRS,—Having had lately several inquiries as to the result of the appeal in the case of Chisholm *v.* Radcliffe Local board, in which I successfully contended that medical men are by law bound to receive the fee of two shillings and sixpence intact for each notification under the Infectious Diseases Notification Act, 1890, and as others besides my correspondents may desire the same information, I am glad to be able to inform all whom it may concern that the fees, with costs, were paid in full and no appeal attempted. Consequently, according to Judge Jones's decision, unless the local authorities arrange otherwise, and thus save double postage, medical men can send the notices in unstamped envelopes, and the medical officer is bound to receive them. Should the local authority attempt to deduct the postage from the bill, as they are ill advised by the Local Government Board to do, they can be sued at court for the full fee; but, if the notices be foolishly prepaid, the stamps cannot be sued for, unless, as I have just said, the authority agreed beforehand to pay. Should the medical officer of health, or such officer as the notice be addressed to, refuse to receive the letter, as was done in my case, it is returned to the sender, who should receive it and pay whatever postage is charged, as it will be evidence, should the case come to trial, that he has done the work for which he claims his fee, and in this instance the out-of-pocket stamp value for the returned notice. I am advised that, should any person be so inclined, any local authority refusing to accept delivery of a notice under the Infectious Diseases Notification Act, 1890, whether prepaid or not, is liable to an action at law for ignoring the notice, and thus endangering the health and lives of the community. It is evident, therefore, that for the present, and until the Act is altered, they are on the horns of a dilemma, and medical men are idiotic who put their hands into their own pockets for stamps, to save the rates, when by law they are exempted.—I am, Sirs, yours truly,

KENNETH MACKENZIE CHISHOLM, M.D.

Radcliffe, near Manchester, Feb. 22nd, 1892.

THE DOVER SANITARY AUTHORITY AND INFLUENZA.

To the Editors of THE LANCET.

SIRS,—In your review of a pamphlet issued by Dr. Sisley I see you refer to the action of the Dover Town Council in a way calculated to convey an erroneous impression as to the notice issued by the above-named authority. Allow me to say that this notice was not an empty threat, but was framed and circulated as an educational instrument with two specific objects in view—viz., first, to declare the fact, now pretty clearly established, that influenza is a dangerous infectious disease; and, secondly, to remind people that the Public Health Act of 1875 provides a method for dealing with persons who, whilst suffering from a dangerous infectious disease, wilfully expose themselves in public places &c. If no proceedings have hitherto followed the notice in question it is not because the Dover Sanitary Authority has been indulging in a farce, but because no clear case has arisen in which a prosecution could be instituted. Suffice it to add that we believe the notice has not only been of great service, but has answered the purpose for which it was issued, and, further, that the course taken has been so far appreciated that it has been followed by many other sanitary authorities.—I am, Sirs, yours faithfully,

M. K. ROBINSON, M.D.,

Dover, Feb. 22nd, 1892. Medical Officer of Health for East Kent.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

A SPECIAL MEETING of the governors of this institution was held on the 22nd inst., for the purpose of considering certain alterations in the laws affecting the honorary medical and surgical staff. Hitherto the terms governing these appointments have heretofore precluded the holding of any office at other hospitals, except those on the consulting staff. It is proposed to do away with this restriction, so that the holders of appointments at the General Hospital may be eligible for other hospitals, and also that any officer on the staff of other hospitals may be attached to the General Hospital when a vacancy occurs. The removal of this barrier is in keeping with modern ideas, and also places the hospitals of the city on the same level with regard to professional appointments being held simultaneously. The alteration is rendered the more desirable since the staff of the workhouse infirmary can be selected from a wider field, and choice made of candidates engaged in duties of a similar kind at the largest hospitals. The other important alteration is that of the honorary medical and surgical staff each member shall be elected for fifteen years, and shall only once be eligible for re-election for a further term of ten years, but he shall not be eligible for re-election if, being a medical officer, he is sixty-five years of age, or a surgical officer, he is sixty years of age, and he shall vacate office on attaining that age. None of the officers, honorary or assistant, shall hold any other office which interferes with the efficient discharge of his duties at the hospital. These, with some minor details, commend themselves on the ground of progress and justice, and no doubt will be ratified at the subsequent meeting to be held shortly.

The Llandudno Convalescent Home.

This home is to be opened on May 7th, so the Hospital Saturday delegates were informed at a social meeting held on the 23rd inst. It was stated also that a magazine was about to be started in support of the Hospital Saturday movement. The premises at Tyn-y-Coed were about to be furnished, some stock had been taken over, and the prospects were bright for the future working of the estate. The promoters of this valuable movement may be congratulated upon the near approach of success to their efforts.

The General Dispensary.

Alderman Clayton presided at the annual meeting held on the 24th inst. The report stated that the income for the year had been £7839 17*s*, while a balance of £356 11*s*. 5*d*. had been carried forward. The total number of patients admitted during the year by tickets had been 29,534, an increase of 3504 over the previous year. The average cost of patients was 3*s*. 6¾*d*., as against 3*s*. 11¾*d*. Teeth and accident cases had also been 3935. The amount of £1151 2*s*. 2*d*. was acknowledged from the Hospital Saturday Fund. There had been an overdraft of £71 9*s*. 8*d*. on the relief fund, which was a matter of regret, as it crippled the medical officer's work. After some discussion about the tickets, the usual votes of thanks were passed.

Feb. 25th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Influenza and the Death-rate.

CASES of influenza have become less frequent of late, and the death-rate has fallen to a ratio nearer the normal one. Still one hears of professional and lay friends being down with the disease, which has been prevalent here as elsewhere, and the fatalities of the winter from it, its accompaniments, and from other causes incidental to severe weather, have been grievously numerous. The gaps which have been made in the ranks of old citizens exceed those made by any previous winter.

Presentation to a Local Coroner.

Allusion was made in a previous letter to the fact that Mr. Henry Churton, the medical coroner for the Chester district of the county of Cheshire, and for the borough of Birkenhead, had completed his fiftieth year of office as coroner. Mr. Churton was appointed in 1841, when Birkenhead, Crewe, and other important centres with large populations were villages. He was then twenty-eight; hence he has now attained his seventy-eighth year, and still possesses excellent health. He had lately the misfortune to suffer a severe bereavement in the death of his wife. Advantage was recently taken by some residents at Birkenhead to present him with a silver bowl as a token of the esteem in which he was held in that town. In return-

ing thanks, Mr. Churton said that, though he had been urged by some friends to retire, he hoped to be able to perform his duties for some time to come.

The Hospitals and their Friends

The annual meetings of all the hospitals have been held now. Special appeals on behalf of the Stanley and of the Royal Southern Hospitals had recently to be made, and the response was very generous. It can hardly be said that four general hospitals are too many for such a city as Liverpool, nor that they are out of proportion to those in other cities and towns, taking the aggregate number of beds. The difficulty here has always been that in so modern a city as this the oldest charities have not the liberal endowments of more ancient cities, and are almost entirely dependent upon annual subscribers, the Hospital Sunday and Saturday Funds, donations and legacies, which latter have to be expended, instead of being invested as could be wished. Citizens who have subscribed for many years are removed by death, and their places are not filled by new subscribers in equal proportion. Meanwhile the work done by the hospitals continues to be as heavy as, even more so than, previously.

Feb. 24th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Fleming Memorial Children's Hospital.

THE annual meeting of the Newcastle Children's Hospital has been held. This fine and very commodious building was erected by the late Mr. Fleming, solicitor, of this city, as a memorial of his wife. The number of in-patients treated has been 431, being an increase of 2.0 over the previous year; while the number of operations performed has risen from 53 to 137. As regards the financial position of the hospital, it was not so satisfactory. The increased work had caused a loss on the year's working of about £600. It was explained that, unless more public support was given to the institution, some of the beds would have to be closed; but, from the signs of fresh efforts and donations promised, I think this is unlikely to occur. If the working men of the north were roused, they could keep up this (and any other medical charity here), which has been established principally for their benefit.

Newcastle Health Society.

The second lecture of the course promoted by the Newcastle Health Society has been delivered on the Eye by Mr. G. E. Williamson, F.R.C.S., honorary surgeon to, and surgeon of, the eye department, Newcastle Royal Infirmary. The lecture was well received and fully illustrated, as also the lecture which followed by Dr. Drummond, physician to the Royal Infirmary, on the Brain. All these lectures have been very well attended.

Our Handwriting and "Ourselves as others see us."

A writer in one of our daily papers, on the question of handwriting, says that "doctors are very clever men, but they are subject to fads, and they are very fond of writing about things they do not understand." He asks: "Now, what do doctors know about handwriting? Can any living being except a chemist decipher their scrawls?" He further says that sloped writing is natural, as may be seen if anyone will sit down and try to make straight strokes they will slope to the right, and if made with the left hand they will be found to slope in the contrary direction, which he thinks proves that sloped writing is natural.

Alnwick: High Death-rate.

At the last meeting of the Alnwick Board of Health the medical officer, Dr. Easton, presented his report, which showed that during the month of January the number of deaths rose to 33, and that this was principally caused by diseases of the respiratory organs. This excessive death-rate was equal to an annual mortality of 50·18 per 1000 of the population. At ordinary times the death-rate of the town is not at all high.

Darlington Hospital.

The annual report of the Darlington Hospital, presented at the meeting last week, shows that 109 patients had been admitted last year. There were twelve deaths, a percentage of 6·41. The operations numbered sixty-one. The work of the out-patients' department showed a considerable increase, in great part attributable to influenza; 4047 out-patients' tickets were brought to the dispensary, and 1120 patients were attended at their own homes. The number of visits paid was 9118. The financial statement was satisfactory, leaving a balance of £211 with the treasurer.

Weardale and Teesdale.

The Weardale Lead Company write to the sanitary authority stating that they have put up in their mine shops the authority's notice with respect to the overcrowding of mine shops, remote places where workmen miles from home sleep during the week. The company also intimate that they have asked their men to avoid further complaint. The authority, however, take the position that responsibility for continuance of the cause of complaint will still rest with the company. The Teesdale medical officer, in his annual report to the sanitary authority, says that the great falling off in the dale population is entirely owing to the low wages and want of employment, obliging young men to seek employment in other places.

Carlisle.

The annual meeting of the Cumberland Infirmary at Carlisle has been held, the report showing that 750 in-patients had been received during the year. The death-rate for the year has been very high, standing at 7·3 per cent. The financial statement was satisfactory, showing a small increase of subscriptions received over those of the previous year. £386 had been collected by the Ladies' Association, and £624 from Hospital Sunday Fund and collections in churches, being a little over the ten years' average. There had been a small reduction in the cost of maintenance of patients. The committee recommend that the sum of £1000 received under the will of Miss Thomason Nelson of Moor-row should be applied to the current account, subject to the sanction of the governors. The annual meeting of the subscribers of the Carlisle Dispensary has also been held. The medical report showed that 3477 cases had been treated at the dispensary during the year; of that number, 1972 were home patients and 1505 out-patients. The mortality showed that of these 96, or 2·7 per cent., died of the complaints treated. Bronchitis stood highest, with an array of 550 cases. During the year an epidemic of measles broke out; 224 cases were entered, and 6 proved fatal. Influenza, after a year's absence, reappeared in May, but was of a mild type; in December it again appeared, 96 cases being registered in that month. It was remarked that 3477 was the largest number remembered as being on the books of the institution in a year.

Stockton: Opening of New Baths.

At Stockton the new baths erected by the corporation were opened by the Mayor last week. The establishment is most complete, comprising slipper, swimming, and Russian vapour baths. The swimming bath is said to be one of the finest in the kingdom, and is provided with forty dressing boxes. This bath is seventy-six feet long by twenty-seven feet wide. The whole cost of the baths has been over £7000. The corporation is to be congratulated on its public spirit and advanced position in sanitation.

Newcastle-on-Tyne, Feb. 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University Court.

AT a meeting of the University Court last week Dr. John Wyllie, Edinburgh, was appointed Additional Examiner in Clinical Medicine for one year from Jan. 1st last. Recognition was also granted to the Public Health Laboratory of the University of Aberdeen as one in which practical instruction is given in the methods of investigating subjects pertaining to public health, which should qualify for graduation in science in the Department of Public Health in the University of Edinburgh; and to Professor Matthew Hay, M.D., Aberdeen, as teacher of public laboratory work in the laboratory.

The Question of Unsound Meat in Edinburgh.

There have from time to time been expressions of dissatisfaction from the butchers as to reports on the seizure of unsound meat in Edinburgh, and the recent case of anthrax appears to have made them still more

anxious to have steps taken to put the trade above suspicion. A deputation from the Master Butchers' Association has had an interview with a subcommittee of the Public Health Committee of the Town Council, after which the matter was discussed at length by the whole committee. The proposal involved the establishment of a clearing-house, into which all dead meat should be sent in order to be inspected and certified before being exposed for sale. This suggestion, if carried into effect, and the work of inspection committed to skilled persons, would be as satisfactory a guarantee as could be provided, and would do much to lessen the feeling of uncertainty and insecurity which lingers in the public mind.

The Health of Edinburgh.

The mortality last week was 81, making the death-rate 16 per 1000. Diseases of the chest accounted for at least 40 deaths, and zymotic diseases for 9, of which 4 were due to measles. The intimations for the week comprised: typhus fever 1, typhoid fever 1, diphtheria 9, scarlatina 12, and measles 78.

Scottish Microscopical Society.

At the meeting of this society last week, Mr. Gustav Mann made an interesting and elaborate communication on the Phenomena of Fertilisation in the Embryo Sac of Flowering Plants, which he illustrated by means of diagrams and numerous microscopical sections. Dr. Joseph Coats of Glasgow read a paper on the Pathology of Sudamina, which he illustrated by means of a microscopical demonstration. After reviewing the present position of our knowledge on the subject and the various views held, he contended that the sudamina were the result of blocking of the sweat glands, and the condition was accompanied with leucocyte migration, and was an irritative or inflammatory one. Mr. George Brook, lecturer on embryology in the University, made a communication on some recent researches on "direct" or Amitotic Nuclear Division, which, however, he was unable to finish owing to the time occupied by the other papers.

The Edinburgh Association for the Reform of Medical Education.

This Association has prepared and presented a second statement to the Universities Commissioners on Draft Ordinance No. 10 (General). The statement refers to the duties and emoluments of professors, lecturers, and assistants.

Feb. 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Royal University of Ireland.

AT a meeting of the Senate last week several Fellows were appointed, some reappointed, and examiners selected for the ensuing year. Drs. Ambrose Birmingham and W. Thornley Stoker were appointed Medical Fellows.

British Medical Association: Dublin Branch.

The fifteenth annual meeting was held last week in the Royal College of Physicians, presided over by Dr. Walter G. Smith. The members dined in the College in the evening. The President for next year will be Dr. Arthur Foot, senior physician to the Meath Hospital.

Poor-law Officers.

A deputation from the various Irish associations interested in the matter waited on the Vice-President of the Local Government Board with reference to the question of superannuation, and urged the necessity of having the Union Officers' Superannuation Bill of 1884 passed into law. Mr. Morris promised that their views should be laid before the Government, and that he would do all in his power to redress the grievances of Irish Poor-law officers.

Proposed Hospital for Consumption.

A meeting was held last week at the Royal College of Physicians for the purpose of establishing a hospital for phthisical patients in the neighbourhood of Dublin. Dr. Finny, President of the College, occupied the chair, and stated that his Excellency the Lord-Lieutenant had promised to contribute £500 provided that the sum of £10,000—which the committee considered necessary before starting the institution—was subscribed within six months, while the Countess of Zetland had collected a sum of £1500. The object of the committee, he said, was that the hospital should be non-sectarian, that it should be a place where the poor might find for themselves a home where they would have pure air. The Registrar-General believed that the institution was necessary, because the disease was infective and could not be treated in ordinary hospitals. Considered as a single disease, it was the most potent cause of death in Ireland, more than one-tenth of the deaths registered in Ireland between 1871 and 1880 being due to it. The building would cost probably £2000, and about £5000 a year for maintenance.

Dublin Main Drainage.

Mr. Cotton, chief engineering inspector of the Local Government Board, held an inquiry last week, in the City Hall, in reference to the application made by the Corporation of Dublin to obtain the sanction of the Board for obtaining loans amounting to £278,000 for the purpose of carrying out the proposed main drainage scheme for the city. The Lord Mayor, who was examined, stated that the scheme, which had been unanimously adopted by the Corporation, consisted of an intercepting sewer from Kingsbridge on the north side to Marlborough-street, and to a place on Burgh Quay. There was also a sewer provided for Kilmainham, and another for Island Bridge, joining the sewer at Kingsbridge; while a syphon under the Liffey joins the north and south systems. Ultimately the sewage is discharged into the outfall, running along parallel to the Pembroke and Rathmines main outfall sewer, round the Pigeon House Fort to the White Bank, where the precipitation tanks are. At the White Bank the sewage would be stored in tanks, and chemically treated. The solid sludge would fall to the bottom, leaving the clarified effluent, which would be precipitated into the river in a harmless condition. The solid matter would be pumped into a steam barge, and then carried out to sea. The sewers will be constructed of Portland cement concrete, with an internal ring of four inches and a half of brickwork laid in Dublin cement. Mr. Chatterton of London is the sanitary engineer, and there is no reason to doubt that the proposed scheme will be sanctioned by the Local Government Board. The cost of repayment will be about 8*d.* in the pound on the valuation.

The late Mr. N. C. Whyte, M.R.C.S.

The late coroner for Dublin, Mr. Whyte, died without leaving any means for his widow and daughter, and a fund has been started for the support of the widow, her daughter having died within the last few days. Although Mr. Whyte drew a salary of £500 yearly, yet he was a man of great benevolence, and subscribed largely to various charitable objects, and, his health being delicate, he was unable to insure his life.

Coroner for South Kilkenny.

There were four candidates for the vacant coronership, three of whom were medical practitioners. The voting was as follows:—Dr. Walsh, 877; Dr. Stephenson, 830; Mr. J. J. Shee, 508; and Dr. F. E. Cane, 314.

Cork Union: Election of a Medical Officer.

By the death of Dr. Crowley a vacancy for a dispensary medical officer had arisen, and this week a meeting of the dispensary committee took place to elect a successor. There were six candidates, three of whom withdrew, and finally Dr. O'Mahony was elected by a majority of votes.

The Lord-Lieutenant has appointed Patrick W. Maxwell, M.D., to be Surgeon Aurist in Ordinary to his household.

Surgeon-General Samuel B. Roe, C.B., of Ballyconnel House, has been appointed sheriff for the county of Cavan.

Feb. 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Novel Treatment of Neurasthenia.

HYPODERMIC THERAPEUTICS continue to grow in favour. This applies not only to the chemical substances of the Pharmacopœia, the hypodermic administration of which has in recent years so much extended and is now firmly established, but bids fair to take a new departure on the lines advocated by Brown-Séquard. In this latter connexion M. Constantin Paul, at a recent meeting of the Academy of Medicine, related his observations of a certain number of cases which he had treated by injections of a preparation of nervous substances into the subcutaneous cellular tissues.

The patients over whom his observations of this novel therapeutic method extended numbered eleven, which he classified as three of chlorotic neurasthenia, three of classic neurasthenia, one case of permanently slow pulse, and four ataxics. The liquid used was a solution of 1 in 10 of cerebral grey matter taken from the sheep, sterilised by carbonic acid in Arsonval's apparatus. This solution was injected in the gluteal region, the dose being 5 cc. It was well borne, producing no reaction, either local or general. Occasionally a slight lymphatic engorgement was noticed, which disappeared in four or five days; but in the two hundred injections to which the eleven patients were subjected in no case was there abscess or other local inflammation. The first sensation experienced by the patients was one of comfort and returning strength, the previous muscular weakness diminishing sensibly. The vertebral pains and spinal hyperæsthesia, and, in the case of the tabetics, the lightning pains, disappeared gradually. Appetite for food also came back, and those of the patients who were previously dyspeptic now assimilated their food so well that they began to increase in weight. In the ataxics sexual power returned with the general amelioration. M. Paul concludes from these considerations that in injections of grey cerebral matter we have a nervine tonic of no mean order. He compares a neurasthenic with an accumulator which it is impossible to charge; while the condition lasts he is unable to transform his food into force. After the least effort his muscular and intellectual forces are exhausted. But the injection of nervous matter in the manner indicated promotes the utilisation of food and its due assimilation; so that the nervous system now becomes a condenser, which, if charged, the subject acquires force which he can dispose of at will. It is to be noted that it is the nervous force which first returns in all these cases. Following this, and as a consequence, the power to do intellectual and muscular labour comes back; the improvement in the condition of the blood follows later on. In conclusion, M. Paul expresses his conviction that this new therapeutic departure will be found to ameliorate the neurasthenic condition much more rapidly than the methods of our ordinary materia medica—an opinion which strikes one as being rather sanguine.

Rickets a Parasitic Disease.

To the list of ills to which our humanity is the inevitable but unwilling heir owning a microbic origin must, according to Mercoli, now be added rickets. This observer has already, he submits, in a series of anterior researches, traced sciatica, chorea, and hydrocephalus to their microbic sources. Continuing his investigations in the cases of children dead of hydrocephalus and rickets, he confirmed his previous conclusions, and has, moreover, he affirms, succeeded, after examining and submitting to bacteriological methods the costal nodes peculiar to rickets, in obtaining pure cultures of a specific microbe. In adults, according to this observer, the micro-organism of rickets produces merely local symptoms; but, in the case of young children unaccustomed to the presence of these microbes, the affection is at first general, finally localising itself where functional and formative activity is most intense—viz., in the osseous and nervous systems.

The Function of the Supra-renal Bodies.

According to MM. Langlois and Abelons, who, at a recent meeting of the Biological Society, brought forward the results of their further researches on the function of these physiologically little known organs, the destruction of one supra-renal body does not entail death, while the removal of both invariably does, accompanied by all the phenomena described by Brown-Séquard, paralysis of the respiratory muscles, &c. This paralysis they found to affect the terminal nerve plates in the muscles. At the moment of death, and a little before, the sciatic and phrenic are absolutely inexcitable, although the muscles supplied by these nerves in part respond to stimulation. The blood of guinea-pigs on which the observations were made caused, when injected under the skin of the frog, phenomena analogous to curarisation, and MM. Langlois and Abelons incline to the belief that a chief function of the supra-renal capsules is to destroy or neutralise some such poisonous substance engendered by the organism.

French Congress of Surgery.

The Surgical Congress of 1892 will be opened in Paris at the Faculty of Medicine on Monday, April 18th, under the presidency of Professor Demons of Bordeaux. The first sitting will be held at 9 A.M., and is to be devoted to the discussion of general questions, but the formal inauguration of the Congress will take place at 2 P.M. The following questions have been placed on the agenda for discussion: (1) The pathology and treatment of surgical gangrene; (2) the pathology of infectious complications in the surgery of the urinary organs; and (3) surgical operations on the biliary passages, with their immediate and remote results. The morning session will be devoted to general discussion or visits to the surgical wards of the hospitals. Those desirous of taking part in the Congress are requested to forward the title and conclusions of their intended communications to M. Félix Alcan, publisher to the Congress, 108, Boulevard St. Germain, of whom also any inquiries may be made.

Paris, Feb. 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Koch.

AT Professor Koch's invitation several representatives of the Government, Surgeon-General von Coler (head of the medical department in the Prussian War Office), many other well-known medical men, and a large number of members of the Prussian House of Deputies, visited the new Institute for Infectious Diseases yesterday. They met in the lecture-hall of the Institute, where Professor Koch delivered an interesting lecture on the aims and labours of the establishment. He alluded especially to the recent researches carried on in the Institute with regard to protective inoculation and the cure of the most dangerous infectious diseases. The lecture was followed by a demonstration of the most important bacteria by means of the large electric projection microscope. Dr. Koch then led his guests through the hospital and the laboratories of the scientific department. The *Post* states that Dr. Koch intended to leave Berlin yesterday evening for Sicily, to spend four weeks there.

A Bacteriological Discovery.

The well-known Japanese bacteriologist, Kitasato, who works in the scientific department of Koch's Institute for Infectious Diseases, has made an important discovery, which he records in the *Zeitschrift für Hygiene*. He has discovered by attempts at cultures from sputa that the great majority of the tubercle bacilli found in sputum are dead, a fact which cannot be proved microscopically, because dead bacilli stain just as rapidly and as intensely as living ones, from which also they do not differ in form. The same is true of preparations made from the contents of vomicæ. This discovery is of considerable importance from its bearing on the diagnostic value of preparations from sputum, and on the question of the transmissibility of pulmonary tuberculosis from one person to another.

Personal Items.

Professor Adolf Kussmaul, one of the most distinguished clinical teachers in Germany, celebrated his seventieth birthday yesterday. He resigned his Strasburg professorship in 1889, and retired to Heidelberg.

The Halle Academy of German Naturalists has conferred the Cothenius Medal on the Anatomist Professor Retzius of Stockholm. This medal was founded in memory of Christian Andreas Cothenius, physician-in-ordinary to Frederick the Great, and Prussian Surgeon-General during the Seven Years' War, who died in 1789.

Dr. Kopp, Professor of Chemistry in the University of Heidelberg, died on the 20th inst.

Dr. Moritz Altmann, a district medical officer, whose name became honourably known more than forty years ago, owing to his zealous activity when famine fever was raging in Upper Silesia in 1848, died the other day.

Influenza.

The number of deaths in Berlin from influenza from the beginning of this winter's epidemic down to the 6th inst. was 544.

It is reported from various parts of Saxony that many dogs have been attacked of late by influenza. The symptoms are complete loss of appetite, aversion to water, inclination to bite, and water in the eyes. The disease is epidemic, and death is not infrequent.

London Vigilance Society.

The secretary of the London Vigilance Society was here the other day to deliver to the Emperor William the address, the sending of which was resolved upon at a meeting held under the presidency of the Lord Mayor. The Foreign Secretary, Baron Marschall, who received the address in His Majesty's name, expressed the sympathy with which the latter regards the humane efforts of the Society, and alluded in grateful terms to its action on behalf of German girls living in London.

Berlin, Feb. 23rd.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Trial of a Medical Student for Alleged Poisoning.

PROFESSIONAL circles of this city have been much interested in the trial of a medical student for the alleged poisoning of his wife. He had clandestinely married, and at the time of his wife's death he was a medical student in one of the colleges of this city, and she was a pupil in one of the most fashionable schools for women. Her sickness was due to an operation which he performed to procure abortion, but her death was attributed to morphine administered by him. He prescribed four grains of quinine and one-sixth of a grain of morphine in capsules, and the theory of the prosecution was that in one capsule he placed a fatal dose of morphine. Suspicion of crime was not excited until several weeks after death, when the body, fifty-three days after burial, was exhumed and an examination made. Morphine was traced, but no evidence of quinine. Experts of the highest rank appeared on both sides. The theory of the defence was that the dead woman either did not die of morphine poisoning, or, if she did, that she was unusually susceptible to its effects owing to diseased kidneys, and one-sixth of a grain proved fatal. The points of scientific interest were: (1) As to the possibility of determining the condition of the kidneys fifty-three days after death; and (2) as to the reliability of the tests for quinine. The first was decided in the negative by an experienced pathologist. As to the second, the prosecution had relied upon the following tests for quinine by Professor Wittans—viz., absence of fluorescence, the bromine experiment, and the absence of bitter taste. Professor Wormley, for the defence, contended that fluorescence is no certain test when it is applied to the chloride of the substance; the failure to obtain a green colour with bromine is not conclusive; and finally, experiments by Koerne show that quinine may be modified in form when it passes through the body, and its bitter taste be lost. The verdict was "Murder in the first degree." The expert testimony was so conflicting as to be entirely ignored.

Increase of Slum Population in Cities.

The United States Commission of the Labour Bureau publishes some interesting facts relating to the increase of population in the congested wards of several cities. In New York the increase in the overcrowded districts was in twenty years 9·38 per cent., while the increase for the whole city was 60·81 per cent. In Philadelphia there has been a loss in the compact wards in twenty years of 6·56 per cent., while other portions of the city show an increase of 68·91 per cent., and the total gain for the whole city was 55·33 per cent. In Boston for ten years the slum population increased 1·04 per cent., while the other parts of the city increased 31·96 per cent. The report shows that the crowded population of our cities is on the whole slowly declining.

Sanitary Inspections at Havana, Cuba.

For several years the United States has maintained a sanitary inspector in the consular office at Havana. During the past year he examined 636 vessels bound to the United States; of these, the sanitary condition of 343 was reported as good, 193 fair, 100 fair only, suspicious, or bad. All the vessels which had yellow fever on board in the harbour lay at the wharves and mostly on the Havana side, thus demonstrating, the inspector says, that the infection is about the wharves and not in the waters of the harbour. The inspector grants health certificates to applicants in accordance with the rules of our quarantines. The certificate sets forth that the recipient is acclimatised to yellow fever either by a previous attack of the disease or by a continuous residence for ten years or more in towns and cities habitually subject to it in an epidemic form, or where it prevails endemically, and by having passed through at least one severe epidemic; the certificate also states that the person is protected from small-pox, and is free from leprosy. To 4569 persons these certificates were granted and to 455 they were refused. The value of these certificates is shown by the fact that not less than 20,000 such certificates have been issued by the inspector, and in no instance has the recipient been subsequently afflicted by either disease. The effect of these sanitary inspections and examinations of vessels, crews, passengers, and baggage, in keeping out contagious fevers, leprosy, and other diseases from the United States, is very great. The influence of the examinations in furthering maritime sanitation and in preventing contagious diseases from invading a vessel is quietly felt all through the harbour of Havana. Captains and owners of vessels bound to the United States keep and put their vessels in better sanitary condition, keep bilges sweeter and cleaner, make efforts to prevent contagious diseases from invading the vessel, and, if once aboard, to get rid of the influence. It is interesting to notice that the inspector has frequent occasion to refuse certificates to persons suffering from leprosy. He states that there are not far from 200 cases in Havana, and it requires constant vigilance on his part to prevent them from emigrating to the States.

New York, Feb. 5th.

Obituary.

THOMAS SYMPSON, F.R.C.S.,

OF LINCOLN.

BY the unexpected death of Mr. Thomas Sympson the city of Lincoln loses one of its best known and most highly esteemed practitioners. His father, Mr. Thomas C. Sympson, also a medical man, was for many years in practice in the same city. Mr. Thomas Sympson, who was born in the year 1825, was an apprentice to his father, and afterwards entered as a student at St. Bartholomew's Hospital, where he gained several prizes. In 1847 he became a member of the Royal College of Surgeons, and was appointed house surgeon to the Lincoln County Hospital, which post he resigned in 1852, and commenced practice in the city of Lincoln. In 1854 he was elected surgeon to the Lincoln County Hospital, and at the time of his death was senior surgeon. He also held the appointments of honorary surgeon to the Lincoln General Dispensary and the Lincoln Asylum, and was at one time surgeon to the city gaol. He became a Fellow of the Royal College of Surgeons in 1872, after examination. Mr. Sympson represented the Midland Branch of the British Medical Association for many years on the Council of the Association, and had held the office of President of the branch. He was also a Vice-President of the Ophthalmological Society. He took great interest in the Lincolnshire Medical Benevolent Society, and was one of the trustees. His knowledge of medical literature was very extensive, and he was well acquainted with the collateral sciences. Known throughout the county as a skilful surgeon and as a successful practitioner, his loss will be severely felt by his brother practitioners, with whom he was ever on good terms; they highly esteemed him as a straightforward, honourable man, and frequently availed themselves of his advice. His loss will also be much regretted by a large circle of friends to whom he was endeared by his many amiable qualities. A day or two before his death he exhibited symptoms of angina pectoris, which proved fatal on the 10th inst. By those who remember the genial presence of Mr. Sympson, the kindness of heart which ruled his conduct towards all, and his devotion to surgery, as exhibited more especially in his untiring work at the Lincoln County Hospital, his memory will never be forgotten, nor will the high standard set by him prove without its value as an encouragement in the struggle of life.

MR. COOKE'S SCHOOL OF ANATOMY, PHYSIOLOGY, &C.—The London University has recently recognised Mr. Thomas Cooke's School of Anatomy and Physiology as a teaching institution. This will enable students who have attended the courses there to enter for the degrees given by that body up to the Intermediate M.B. Examination.

Medical News.

BRITISH MEDICAL SERVICE.—The following candidates for commissions in the Medical Staff of Her Majesty's Army were successful at the recent examination in London:—

		Marks.
Eq.	Hinge, H. A.	3160
Eq.	McDermott, T.	3160
	Bray, H. A.	3140
	Hodgens, C. O'C.	3095
	Slayter, E. W.	3070
	Erskine, W. D.	3020
	Tyrrell, A. F.	2945
Eq.	McNaught, J. G.	2940
Eq.	Smyth, W. J.	2940
	Chambers, J. G.	2910
Eq.	Austin, R. F. E.	2900
Eq.	Moore, G. A.	2900
	Condon, E. H.	2870
	Jones, T. P.	2850
Eq.	Marder, N.	2810
Eq.	Thurston, H. S.	2810
	Lewis, R. C.	2795
	More, L. P.	2790
	Faichnie, F.	2760
	Walker, G. S.	1730
	O'Reilly, W. H.	2710
	Mansfield, G. S.	2705
	Ryall, W. P.	2695
	Thompson, A. G.	2670
	Read, H. W. K.	2665

INDIAN MEDICAL SERVICE.—The following is a list of candidates for this service who were successful at the recent competitive examination:—

		Marks.
	Haig, P. B.	3425
	Robson-Scott, C. G.	3395
	Melville, H. G.	3370
	Maddox, R. H.	3310
	Earle, H. M.	3290
	Fullerton, T. W. A.	3260
	Hugo, E. V.	3250
	Hubbard, A. O.	3245
	Smith, H. A.	3235
	Swinton, F. E.	3230
	Green, D. R.	3195
	Smith, G. Mac I. C.	3155
Eq.	Burnett, S. H.	3145
Eq.	Jackson, T.	3145
	Hulbert, J. G.	3140
	Macrae, J. L.	3065
	Gabbett, P. C.	3060

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the respective subjects:—

Surgery.—R. Freer, St. Mary's Hospital; A. W. Fyffe, Middlesex Hospital and Belfast; W. C. Hinde, Middlesex Hospital; J. H. Hobling, St. Mary's Hospital; H. F. Ransome, Owens College, Manchester; F. K. Rider, Yorkshire College, Leeds; J. W. Smith, London and Manchester; P. M. Toms, Middlesex Hospital.

Medicine, Forensic Medicine, and Midwifery.—G. H. Baird, St. Mary's Hospital and Dublin; W. T. B. Donelly, Guy's Hospital; W. Overend, St. Bartholomew's Hospital; D. L. Thomas, London Hospital.

Medicine and Midwifery.—G. M. Arkle, Liverpool Royal Infirmary; V. J. R. Robin, King's College; G. P. Smith, Guy's Hospital; A. S. Ware, St. Thomas's Hospital.

Forensic Medicine.—P. J. Naden, Queen's College, Birmingham.

Midwifery.—G. R. S. Breeze, Royal Free Hospital; J. R. Daly, King's College.

To Messrs. Arkle, Baird, Daly, Hinde, Overend, and Miss Breeze was granted the diploma of the Society, entitling them to practise Medicine, Surgery, and Midwifery.

MELBOURNE ROYAL COMMISSION. — The Royal Commission now sitting at Melbourne to inquire into the condition of, and the means of improving, the charitable institutions of that city, have had the benefit of listening to the evidence of Dr. Gresswell, who has detailed the advantages to the community of a system of isolation in infectious diseases. He recommends the building of fever hospitals in the Bay. The chief difficulty in Melbourne, as elsewhere, lies in the constitution of the administrative bodies upon whom the efficacy of any sanitary measures largely depends. Dr. Gresswell advises the appointment of a hospital board composed of delegates from the various municipalities interested in the work of the institution.

CANCER HOSPITAL (FREE), BROMPTON, S.W.—The forty-first annual meeting of the governors of this charity was held in the board room of the hospital on the 24th inst., Sir George S. Measom, J.P., chairman. This hospital was founded in 1851 for providing free admission to poor persons suffering from cancer on their own application, and it is satisfactory to notice that the relief afforded increases year by year. The report of the committee showed that during the past year 1788 new patients were received, 682 being in- and 1106 out-patients, whilst the total number of attendances of out-patients was 7498, these figures being in excess of any previous year since the hospital was founded. An earnest appeal is made by the committee for increased support, to enable them to carry on the important work of alleviating, and, as far as possible, arresting, the growth of this terrible disease. The Samaritan Fund for assisting discharged patients had proved very useful, some being sent to convalescent homes, and others receiving pecuniary aid. The medical staff give a course of lectures during the first three months of the year, which are open to all medical practitioners and students. The report and balance sheet were adopted, and the usual votes of thanks accorded.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.—His Royal Highness the Duke of Edinburgh presided at the annual meeting held at the institution on the 18th inst. The attendance was unusually large. The report stated that during the year 1891, 1256 patients, including re-admissions, had been received into the wards. In the out-patients' department 2076 persons were treated. The long-required additional sleeping accommodation for the nurses had been accomplished, and ten more rooms provided. The total outlay of the additions and other improvements amounted to £869.

THE EXTENSION OF CARDIFF INFIRMARY.—The committee identified with the movement for collecting funds for the extension of the infirmary held a meeting last week at the Hôtel Métropole, Cardiff. Mr. Coleman (secretary to the infirmary) explained the urgent need of additional accommodation. The infirmary was scarcely half large enough to meet the requirements of the town. If £6000 could be collected it would cover the cost of the proposed extension. It was resolved that the time had arrived to extend the accommodation of the infirmary; that a public meeting be held early at the town hall, and that a provisional committee be formed for promoting the object in view.

CHARING-CROSS HOSPITAL.—The annual general Court of Governors was held last week. The report for the past year referred to the offer of Mr. J. Passmore Edwards, who had asked to be allowed to build and furnish, solely at his own expense, a convalescent home, with accommodation for fifty beds. Mr. Edwards had already sent a cheque for £5000, and would provide the remainder of the estimated cost of the home when the foundation stone was laid. The Council, continued the report, were most grateful to Mr. Edwards for his munificent gift, and for expressing the hope that his donation would in no way prevent the flow of the subscriptions. The sum now reached was £6600, being the £5000 from Mr. Edwards and £1600 from other sources. The number of in-patients treated during the year exceeded that of any previous twelve months, and the out-patients numbered 23,539.

FRENCH HOSPITAL AND DISPENSARY.—The twenty-fourth annual dinner on behalf of this institution took place at the Hôtel Métropole, Whitehall Rooms, on Saturday evening last, M. Waddington, the French Ambassador, in the chair, supported by the Lord Mayor and members of the diplomatic body in London. According to the report, which was read by the honorary secretary (M. Ruffer), 731 in-patients and 19,274 out-patients received medical relief during the past year, a number largely in excess of previous years. The consequence of this has necessarily been a corresponding increase in the expenses of maintenance, and a deficit remains, represented by the difference between £3213 and £4039. His Excellency made an urgent appeal to the supporters of the institution to come forward and, by a further measure of assistance, to enable the authorities of the hospital to maintain it in its present condition of efficiency. The usual toasts were proposed and responded to after a touching allusion by his Excellency to the painful circumstances attending the death of the Duke of Clarence, and subscriptions were announced amounting to upwards of £2500.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—According to the statements made recently at the annual general meeting of the Royal South London Ophthalmic Hospital, to be called in future the Royal Eye Hospital, South London will, in the course of the next few months, be in possession of a hospital which, both as regards construction and sanitary arrangements, will vie with the best. The hospital is situated in St. George's Circus, and has been carrying on its work for many years at two shops. A fine building has, however, been erected at a cost of £26,000, and presents some noteworthy features. Among these may be mentioned that the entrance to the hospital is under a covered footway, which obviates the necessity of patients waiting in the rain; another is that a blind patient goes from entrance to consulting room and back again without meeting a single edge or projection of any kind; whilst other noticeable features are, a fine asphalted promenade on the roof, and fire arrangements remarkable alike for safety and completeness. These latter consist of a lift which, extending from roof to basement and having no shaft, cannot be affected by fire or smoke. It is reached by a projecting platform outside each floor.

GIFT OF AN ISOLATION HOSPITAL.—The long-felt want of an isolation hospital for the township of Birstall, which adjoins that of Batley, has been provided by the spontaneous offer of Mr. William Robinson, of the Raikes Tower Brewery, and a member of the local board, to give the Volunteer Inn, in Upper Batley Lane, Howden Clough, to be adapted for an infectious hospital. It is in close proximity to the present Batley isolation hospital. The board appreciated and accepted Mr. Robinson's offer.

CITY OF LONDON LYING-IN HOSPITAL.—This excellent charity publishes a special appeal—the only one for twenty years. It shows that 1974 poor women were attended in 1891. The expenditure of the hospital has exceeded its income by over £500. It is alleged that 118 in- and 522 out-patients belonged to the poor of Islington, that they were attended at a cost of over £600, while only £31 was received from that parish in subscriptions and donations. This is an illustration of the fact that most medical charity comes from other districts.

THE SMALL-POX AT BATLEY.—On the occasion of the annual dinner of the Heavy Woollen District Fire Brigade Association, on the 20th inst., the mayor (Alderman Brooke) is stated to have announced that since the outbreak commenced there had been a total of 300 cases, while the deaths numbered 25. He was happy to say that while there had been over 80 houses infected, at the same time there were only now 50 houses so affected—a reduction of 30. There were hopes that the disease would before long be stamped out.

ROYAL NORTHERN SEA-BATHING INFIRMARY.—The past year's report states that the infirmary was open from May 1st until Dec. 12th. In that period 587 patients were admitted. The total income for the year, including £230 brought forward on Jan. 1st last, was £1892 19*s.* 9*d.*, and the disbursements amounted to £1681 4*s.* 10*d.*, an excess of £67 7*s.* 8*d.* over the previous year, accounted for by the extra cost of refurnishing and other necessary outlay. Some additions are to be made at the north end of the infirmary, which will give the accommodation required for the staffs and provide another ward of eight beds for patients.

FUNERAL REFORM.—At a meeting of the Funeral Reform Association, held in the Council Chamber, Halifax, upon the motion of the Archdeacon of Halifax, seconded by the medical officer of health, it was resolved to petition Parliament for improved burial legislation. The Bishop of Marlborough will preside at the third monthly meeting of the Association in the Church House, Westminster, on Thursday, March 3rd, at 4 P.M., when the subjects for consideration will include the means of providing suitable burial-places near populous towns, to be used as quasi-crematoria for the dispersion of the dead by the action of the earth and air, instead of their preservation.

METROPOLITAN HOSPITAL.—The annual meeting was held at the institution, Kingsland-road, last week, Mr. Joseph Fry presiding. The work of the charity had considerably increased during the past year in both the in- and out-patients treated; the total out-patient attendance was 69,196. The receipts show a decrease of £550, and the expenditure an addition of nearly £400, the former being due to the small amount received from legacies, and the latter to the large number of patients treated. Lord Sandhurst, chairman of the Royal Commission on Hospitals, had promised to preside at the festival dinner on behalf of the hospital on June 30th.

TESTIMONIAL TO MR. COLLINS OF DUBLIN.—Visitors to and members of the General Medical Council who are familiar with the kindly, free, and sound judgment of Mr. Collins, the representative of the Apothecaries' Society of Dublin on the General Medical Councill, will be gratified by a little incident recorded as a public notice in the *Irish Times*. "Mr. Collins, for the long period of thirty-three years, has filled the office of one of the honorary secretaries of the Old Men's Asylum, Northbrook-road, Dublin. His colleagues desire to testify their sense of the high value of his services and those of Miss Collins, and attribute largely to them the prosperous state of the institution and its finances." We congratulate Mr. and Miss Collins on this work, so pleasant in retrospect, and so well appreciated by those best able to judge.

BRADFORD EYE AND EAR HOSPITAL.—The thirty-fifth annual meeting of the subscribers was held on Feb. 20th. The number of new patients (no transfers or renewals) was 4113, of whom 1183 were under fourteen years of age, and 1908 were from places beyond the town. The number of in-patients was 517. The average time of stay in the hospital was 16·2 days. Of the 489 major operations, 62 were extractions of cataract in old persons. These make a total of 340 consecutive extractions, without a single case of suppuration following the operation. The income for the year was £2179 16*s.* 10*d.* The expenditure was £1955 1*s.* 8*d.* The investment fund amounts to £11,250.

GREENOCK INFIRMARY.—The annual meeting of the subscribers was held on the 17th inst. The admissions during the past year to the fever house were 145 more than in 1890, and there was an addition during the same period of 66 cases admitted to the medical and surgical wards. The ordinary income exibits an increase of £1597 6*s.* 1*d.* over the previous year, arising chiefly from the larger amount received from public boards for the treatment of fever patients, and from workmen's contributions. It may be stated, however, that the amount paid by public boards includes £900 for cases treated in the previous twelve months, but not paid till last year.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at Midnight on February 23rd, 1892.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total	
Eastern Hospital	189	55	..	18	..	262	442
North-Western Hospital	199	40	..	10	..	249	411
Western ,,	100	21	..	7	1	129	224
South-Western ,,	181	45	..	14	1	241	350
South-Eastern ,,	208	12	1	37	2	260	424
Northern ,,	301	13	..	18	...	332	480
Totals	1178	186	1	104	4	1473	2331

SMALL-POX.—*Atlas* hospital ship, 8.

MEDICAL NOTES IN PARLIAMENT.

Foot-and-Mouth Disease.

IN the House of Lords, on Monday last, the Earl of Cadogan, in answer to Lord De La Warr, said no further facts had been elicited, and from stringent inquiries which had been made it appeared that there was no reason to believe the report that the disease had been introduced by raw hides which had been imported.—Mr. Chaplin also referred to the same thing in the House of Commons.

Sanitation in relation to Gipsy Life.

The Bill promoted by Mr. George Smith for bringing gipsy and van children under educational and sanitary influences will be introduced to Parliament next week. Mr. Burt will have charge of it.

Bill to Amend the Coroners Act, 1887.

On Friday, Sir Walter Foster laid on the table of the House a Bill to Amend the Coroners Act, 1887. It dispenses with the formality of "viewing the body," unless the coroner considers it needful or the jury after having heard the evidence express a desire to do so. The coroner, if the measure became law, would be the only person required to view the body after the present fashion. Amongst the backers of the Bill are Mr. H. S. Wright, Mr. Addison, and Mr. J. R. Kelly.

Taxes on Food.

On Friday, Feb. 19th, Mr. Picton gave notice that he would move, "That taxes on tea, coffee, and dried fruits are objectionable as taxes on food, unjust in their incidence, and ought to be abolished."

The Shop Hours Bill.

In the House of Commons on Wednesday last Mr. Provand moved the second reading of the Shop Hours Bill, which proposes to re-enact certain regulations of the Act of 1886, which expires at the end of this year. These provisions prevent young persons of either sex under the age of eighteen being employed in shops, warehouses, or public-houses for more than seventy-four hours a week, including meal times. The Bill, whilst re-enacting those clauses, applies them to adult women, and provides for the appointment of an inspector to enforce the law. Mr. Gedge moved an amendment declining to interfere with the hours of female labour until women had obtained the Parliamentary franchise. This amendment was afterwards withdrawn. After many members had

taken part in the debate.—Mr. Matthews said that the Government would not intervene as a Government, but wished the House of Commons to take the matter into its own hands. As an individual member of the Government he had to say that the result of his inquiries was not favourable to the Bill. It dealt with adult women in a manner which had not been done in the Factory Acts. The only ground that he had heard for legislation was the medical ground, but he had found no evidence to support the statement that the health of adult women was injured by their labour in shops, although long and in some sense excessive. If anybody asserted that mortality among shopwomen was excessive, he should like to know on what basis such an assumption was made. He would vote against the Bill, but if the House of Commons thought it was a subject for inquiry by a Select Committee, that could be done whether the second reading was accepted or rejected. On a division being taken, 175 voted for the second reading and 152 against. The Bill was then read a second time amid loud Opposition cheers, and on the motion of Mr. Provand was referred to a Select Committee.

Food and Drugs Act.

Mr. Parker Smith has given notice of his intention to introduce a Bill to amend the Sale of Food and Drugs Act, 1875.

Gresham University.

The Charter of the proposed new Teaching University for London was laid before Parliament on Monday last.

And in the House of Commons on Thursday Mr. Chamberlain presented a petition from provincial schools of medicine in England—Birmingham, Bristol, Leeds, Liverpool, Manchester, and Sheffield—praying that the Draft Charter for the proposed New University be not sanctioned by Her Majesty. The petitioners expressed the opinion that the provisions of the Draft Charter, if sanctioned, would admit of a degree in medicine being granted to graduates who had not been examined by the Universities authorities, except in one, and that the final examination; that any such narrowing of the scope of medical education in metropolitan Universities must inevitably tend to lower the standard of attainment which had hitherto been demanded of candidates who desired any degree in medicine; that special advantages for obtaining medical degrees on easy terms would be offered to students who studied in metropolitan hospital schools which would be denied to those studying in provincial schools; and that thereby provincial schools of medicine, together with the hospitals connected with them, would be placed at serious disadvantage and their efficiency impaired.—In reply to Mr. Bartley on Thursday evening Mr. Balfour said he would do his best to endeavour to meet the views of those interested in the matter by stopping public business at 11 o'clock, but the exact date would depend on the course of public business.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ATKEY, P. J., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

BANKS, A., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

BEVAN, RICHARD, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health, Ashford, Kent.

BOGAN, J. H., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Fethard, No. 2, Dispensary District, Medical Attendant to the Constabulary, Irish Light, and the Admiralty, Duncannon Fort, co. Wexford.

BOX, C. R., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

BURDEN, H., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

CLAYTON, J. H., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Casualty Surgeon to the Queen's Hospital Birmingham, vice Clay, resigned.

CROSSFIELD, A. K., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer for the Dittisham Sanitary District of the Totnes Union.

DALZELL, A., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Throat to St. Thomas's Hospital.

DICKINSON, J. C. H., M.B. Camb., L.S.A., has been appointed Medical Officer of the Workhouse, Stepney Union.

DOLAMORE, WILLIAM H., L.R.C.P. Lond., M.R.C.S., L.D.S., has been appointed Medical Tutor to the London School of Dental Surgery, vice H. Baldwin, resigned.

EASBY, W., M.D., has been reappointed Medical Officer and Public Vaccinator of the Castor District of the Peterborough Union.

FAIRBANK, F. R., M.D Heidelb., L.R.C.P. Lond., M.R.C.S., M.R.C.P. Edin., has been appointed Honorary Consulting Surgeon to the Doncaster Infirmary.

FISHER, J. H., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Ear to St. Thomas's Hospital.

FORDE, T. A. M., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

HAYDON, T. H., B.A., M.B., B.C. (Cantab.), L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

HUMPHRY, F. A., F.R.C.S., has been appointed Honorary Consulting Surgeon to the Sussex County Hospital.

KELLOCK, T. H., M.A., M.B., B.C. (Cantab.), F.R.C.S., L.R.C.P., has been appointed House Surgeon to St. Thomas's Hospital.

LAKEMAN, THOMAS, L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Ugborough Sanitary District of the Totnes Union.

LATTER, C., B.A., M.B., B.C. Cantab., has been reappointed Resident House Physician to St. Thomas's Hospital.

LOVELL, C. P., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.P., L.S.A., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin to St. Thomas's Hospital.

MARSH, J. H., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Third A Sanitary District of the Hailsham Union.

MCCREERY, J. O., L.R.C.S. Irel., has been appointed Medical Officer for the South Brent Sanitary District of the Totnes Union.

MILTON, W. F. E., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

MORRIS, EDGAR, M.R.C.S., has been appointed Honorary Surgeon to the Hereford General Infirmary, vice Vevers, resigned.

OBASA, PRINCE ORISADINE, L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat to St. Thomas's Hospital.

PERKINS, J. J., B.A., M.B., B.C. (Cantab.), L.R.C.P., M.R.C.S., has been appointed Non-resident House Physician to St. Thomas's Hospital.

PHILLIPS, P. C., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin to St. Thomas's Hospital.

PICKEN, JAMES, M.B., C.M. Glasg., has been reappointed Medical Officer of Health for the Urban Sanitary District of the Rawmarsh Union.

PURVIS, W. P., B.Sc. Lond., L.R.C.P., M.R.C.S., has been reappointed Non-resident House Physician to St. Thomas's Hospital.

REYNOLDS, E. S., M.D. Lond., M.R.C.P., M.R.C.S., has been appointed Medical Officer of the Crumpsall Workhouse, Township of Manchester.

ROCHE, ANTONY, M.R.C.P.I., L.R.C.S.I., L.M., has been appointed Examiner in Sanitary Science in the Royal University, Ireland.

SIMPSON, E., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Calverton Sanitary District of the Basford Union.

SMITH, K. R., M.D. Lond., B.S., M.R.C.S., has been reappointed Medical Officer for the Harberton and Halwell Sanitary Districts of the Totnes Union.

STOKES, A. W., F.C.S., has been appointed Public Analyst for Hampstead, vice Heisch.

THOMAS, E., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Aberdaron Sanitary District of the Pwllheli Union.

TURRELL, W. J., M.A., M.B., B.Ch. Oxon, has been appointed Medical Officer to the Cutler Boulter Provident Dispensary, Oxford.

UBSDELL, HENRY, M.R.C.S., has been reappointed Medical Officer for the Staverton and Rattery Sanitary Districts of the Totnes Union.

VINCENT, HERBERT E., M.D., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed to the Staff of the Croydon General Hospital, vice Dr. P. T. Duncan, resigned.

WALLACE, C. T., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Ear to St. Thomas's Hospital.

WATSON, F. S., M.R.C.S., has been appointed Medical Officer for the Linton Sanitary District and the Workhouse of the Linton Union.

WILLIAMSON, J. HENRY, M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon to the Ancoats Hospital.

WYMAN, C., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Birmingham.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BRIDGEWATER INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

BURTON MEDICAL ASSOCIATION.—Dispenser. (Apply to Mr. A. Blant, Ebenezer, Shobnell-road, Burton-on-Trent.)

CAMBERWELL HOUSE ASYLUM, Camberwell, S.E.—Junior Medical Officer. Salary to begin at £110 a year, with board, lodging, washing, &c.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Two Surgeons.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C.—House Surgeon.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer. Salary (which will be a progressive one) commences at £100 a year, with furnished apartments, board, washing, and attendance.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary to commence at £85 per annum, with board, residence, and washing in the house. (At end of year a gratuity of £15 is usually given by the committee.)

DISTRICT INFIRMARY, Ashton-under-Lyne.—Assistant House Surgeon and Dispenser. Salary £50 per annum, with board and lodging.

EAST SUFFOLK AND IPSWICH HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

GUARDIANS OF THE POOR OF PADDINGTON.—Assistant to the Medical Superintendent of the Infirmary, and Assistant Medical Officer of the Workhouse. (Apply to the Medical Superintendent at the Infirmary, 285, Harrow-road, W.)

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £85 per annum.

LINCOLN COUNTY HOSPITAL, Lincoln.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow-road, W., and 91, Dean-street, Soho, W.—Registrar.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Physician to in-patients.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Physician.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—House Surgeon for six months. Salary at the rate of 50 guineas per annum, with residence in the hospital, board, and washing.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Junior House Surgeon for six months. Residence in the hospital, board, and washing are provided, and an honorarium of 5 guineas at the expiration of term of appointment.

MANCHESTER ROYAL INFIRMARY (MONSALL FEVER HOSPITAL).—Assistant Medical Officer at Monsall Fever Hospital for twelve months. Salary £100 per annum, with board and residence.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Two Assistant Surgeons.

MIDDLESEX HOSPITAL, W.—Anæsthetist for twelve months. Salary £100.

MONTROSE ROYAL LUNATIC ASYLUM.—Junior Assistant Medical Officer. Salary £80, with board &c.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, (Albany Memorial), Queen-square, Bloomsbury.—Senior House Physician. Salary £100.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—Junior House Surgeon for nine months. Salary at the rate of £60 per annum.

PARISH OF BERMONDSEY.—Analyst. (Applications in writing to be sent to Mr. Harrison, Clerk, Town Hall, Spa-road.)

SALFORD ROYAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

TEIGNMOUTH, DAWLISH, AND NEWTON INFIRMARY, DISPENSARY, AND CONVALESCENT HOME.—House Surgeon (to act as Secretary). Salary £40, with board and lodging.

THE RETREAT, York.—Junior Assistant Medical Officer. Salary £80 per annum, with board, lodging, and washing.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board and lodging provided.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Surgeon for six months. Board and lodging provided.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon. Salary £50 per annum, with board and residence in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

CARDEW.—On Feb. 18th, at Dennington-park-road, West Hampstead, the wife of H. W. D. Cardew, M.R.C.S., of Hayley-street, of a son.

FULLER.—On Feb. 20th, at Bugbrooke, near Weedon, the wife of Andrew Fuller, Surgeon, of a daughter.

GARNHAM.—On Feb. 19th, at the residence of her father (Rowden-hill, Chippenham), the widow of Dr. G. J. W. Garnham, of Smalley, Derby, of a son.

HILL.—On Feb. 18th, at Middlesex County Asylum, Upper Tooting, the wife of H. Gardiner Hill, Medical Superintendent, of a son.

HILL.—On Feb. 19th, at St. Margaret's Mansions, S.W., the wife of W. J. Hill, Esq., M.B., D.P.H., of a daughter.

MACKAY.—On Feb. 19th, at Northumberland-place, North Shields, the wife of W. Murray Mackay, F.R.C.P. & S., L.P.S.G., &c., of a daughter.

STALKER.—On Feb. 18th, at 140, Nethergate, Dundee, the wife of Alexander M. Stalker, M.D., of a son.

STEVENS.—On Feb. 20th, at Springfield, Tulse-hill, S.W., the wife of A. B. Stevens, M.B. Oxon, of a daughter.

MARRIAGES.

APPLEFORD—SEARGEANT.—On Feb. 23rd, at St. Mary's, Kemsing, Kent, S. Herbert Appleford, M.D., youngest son of the late William Appleford, of Coggeshall, Essex, to Mary Annie Seargeant, daughter of the late John Seargeant, of Grange-hill, Upper Norwood.

CROUCHER—CHAPLIN.—On Feb. 18th, at St. Mary Magdalen Church, St. Leonards-on-Sea, Alexander Henry Croucher, M.D., of Eastbourne, second son of Dr. Croucher, J.P., to Mary Rebecca, elder daughter of A. Chaplin, Esq., Chapel-park-road, St. Leonards-on-Sea.

CROUDACE—ROWE.—On Feb. 20th, at St. Andrew's Church, Stoke Newington, James Henry Croudace, Surgeon, of Stafford, to Elsie Emma, second daughter of T. B. Rowe, Esq., of Glan Llyn, Stoke Newington.

REYNOLDS—SANSOM.—On Feb. 23rd, at St. Marylebone Church, Ernest J. Reynolds, L.R.C.P., M.R.C.S., to Rose Ernestine Maria, eldest daughter of A. Ernest Sansom, M.D., F.R.C.P., of Harley-street, W.

DEATHS.

GARDINER.—On Feb. 14th, at his residence, Redcliff-hill, Bristol, George Gardiner, M.R.C.S., aged 72.

PEARSE.—On Feb. 22nd, at St. George's square, S.W., suddenly, George Pearse, M.D., aged 80.

TAYLOR.—On Feb. 15th, at Scarborough, suddenly, John William Taylor, M.D., D.Sc., Medical Officer of Health, Scarborough, and of North Riding of Yorkshire, aged 54.

WILLETT.—On Feb. 21st, at Gunnersbury House, Isleworth, Edmund Sparshall Willett, M.D., J.P., aged 64.

YOUNGER.—On Feb. 19th, at 19, Mecklenburgh-square, W.C., Edward Henry Nelson, the dearly loved son of Edward and Frances Younger, aged 8 months.

N.B.—A fee of 2s. is charged for the Insertion of Notices of Births Marriages, and Deaths.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.

Practitioner's Handbook of Diseases of the Ear and Naso-pharynx. By H. M. Jones, M.D., M.Ch., and W. R. H. Stewart, F.R.C.S. Edin. Fourth Edition. 1892. pp. 392.

BLACKIE & SON, Old Bailey, London, E.C.

A Concise Dictionary of the English Language. By C. Annandale, M.A., LL.D. New and Enlarged Edition. 1892. pp. 818.

CHURCHILL, J. & A., New Burlington-street, London, W.

Alpine Winter in its Medical Aspects. By A. Tucker Wise, M.D. Brux., L.R.C.P. Lond., M.R.C.S. Fifth Edition. 1892. pp. 114.

On the Simulation of Hysteria by Organic Disease of the Nervous System. By Thos. Buzzard, M.D. Lond. 1891. pp. 113.

Hospitals and Asylums of the World. By H. C. Burdett. In Four Volumes and Portfolio. Vols. I. and II. 1891. pp. 701 and 348.

CLARENDON PRESS, Oxford, and CLARENDON PRESS WAREHOUSE, Amen-corner, London.

The Life and Works of John Arbuthnot, M.D., F.R.C.P. By Geo. A. Aitken. 1892. pp. 516.

DAVIS, F. A., Philadelphia and London.

Consumption: How to Prevent it, and How to Live with it. By N. S. Davis, jun., A.M., M.D. 1891. pp. 143. Price 4s.

Syphilis in Ancient and Pre-historic Times. By Dr. F. Buret. Translated by A. H. Ohmann-Dumesnil, M.D. Vol. I. 1891. pp. 226. Price 6s. 6d.

DOIN, OCTAVE, Paris, and BAILLIÈRE, TINDALL, & COX, London.

Traitement des Maladies de la Peau. Par le Dr. L. Brocq. Deuxième Edition. Corrigée et Augmentée. 1892. pp. 894.

KEGAN PAUL, TRENCH, & CO., London.

Marriage and Disease. By S. A. K. Strahan, M.D. 1892. pp. 326.

LEONARD & COMPANY, Detroit, and BAILLIÈRE, TINDALL, & COX, London.

Dictionary of Materia Medica and Therapeutics. By C. Henri Leonard, A.M., M.D., and Thos. Christy, F.L.S. 1892. pp. 387.

LONGMANS, GREEN, & CO., London.

Outlines of Theoretical Chemistry. By Lothar Meyer. Translated by P. P. Bedson, D.Sc. Lond., and W. C. Williams, B.Sc., F.C.S. 1892. pp. 220. Price 9s.

A Study of Influenza and the Laws of England concerning Infectious Diseases. By R. Sisley, M.D. Lond., M.R.C.P. 1892. pp. 119. Price 3s. 6d.

PENTLAND, YOUNG J., Edinburgh and London.

Pentland's Student's Manuals: Outlines of Zoology. By J. A. Thomson, M.A., F.R.S.E. Illustrated. 1892. pp. 641.

PUTNAM'S SONS, New York and London.

Diseases of the Nasal Organs and Naso-Pharynx. By W. Ward, A.M., M.D. 1891. pp. 165. Price 5s.

SIMPKIN, MARSHALL, & CO., London, and WRIGHT & CO., Bristol.

Epitome of Mental Diseases. By James Shaw, M.D. Irel. 1892. pp. 345.

SMITH, ELDER, & CO., Waterloo-place, London.

Saint Bartholomew's Hospital Reports. Edited by W. S. Church, M.D., and W. J. Walsham, F.R.C.S. Vol. XXVII. 1891. With Index. pp. 343.

STOTT, DAVID, Oxford-street, London.

Religio Medici, and other Essays. By Sir Thos. Browne. Edited by D. L. Roberts, M.D., F.R.C.P. 1892. pp. 428.

THE ASSOCIATION, Philadelphia.

Transactions of the Association of American Physicians. Sixth Session. September, 1891. Vol. VI. pp. 319.

UNWIN, T. FISHER, Paternoster-square, London.

The New University for London. A Guide to its History, and Criticism of its Defects. By Karl Pearson, M.A. 1892. pp. 134.

VAIL & COMPANY, New York.

Deafness and Discharge from the Ear. By S. Sexton, M.D. assisted by Alexr. Duane, M.D. 1891. pp. 89.

WRIGHT & CO., Bristol, and KEGAN PAUL, TRENCH, & CO., London.

Pye's Surgical Handicraft. Edited by T. H. R. Crowle, F.R.C.S. With Illustrations. Third Edition. 1891. pp. 570.

Un Cas de Maladie de Morvan; par le Professor Grasset; recueillies par H. Guibert (C. Coulet, Montpellier, et G. Masson, Paris, 1892).—Acute Double Pneumonia successfully treated by Bleeding and Inhalation of Oxygen; by George Foy, F.R.C.S. Irel. (Fannin & Co., Dublin, 1892); price 1s.—Der Comfort des Kranken; von Dr. M. Mendelsohn (August Hirschwald, Berlin, 1892).—A Report of an Investigation into the Causes of the Disease known in Assam as Kála-Azár and Beri-Beri; by G. M. Giles, M.B., F.R.C.S. (Assam Secretariat Press, Shillong, 1890); price one rupee.—The Dog Owners' Annual for 1892; illustrated (Dean & Son, Fleet-street, London); price 1s.—Das Langenbeck-Haus; von E. v. Bergmann (G. Thieme, Leipzig, 1892).—Catechism Series: Public Health, Medicine, Food, Burial, Waterclosets, Disinfectants, Warming, Hospitals (E. & S. Livingstone, Edinburgh, 1892); price 1s. net.—A Drug is its own Antidote; by William Sharp, M.D., F.R.S.; Essay LX. (G. Bell & Sons, York-street, Covent-garden, London, 1892).—Dr. Kállay's Ärztlicher Almanach, 1891 (W. Braumüller & Sohn, Wien, 1891).—Le Bacillus Coli Communis; par le Dr. Gabriel Vallet (G. Masson, Paris, 1892).—Proceedings of the Society for Psychical Research, February, 1892 (Kegan Paul, Trench, & Co., London); price 2s. 6d.—Ueber die strafrechtliche Verantwortlichkeit des Arztes bei Anwendung des Chloroforms und anderer Inhalations-Anästhetica; von Jean Bumtraeger (A. Hirschwald, Berlin, 1892).—Magazines for March: Sunday at Home, Leisure Hour, Boy's Own Paper, Boy's Out-door Games and Recreations, Girl's Own Paper, Girl's Own Out-door Book (Religious Tract Society).

Medical Diary for the ensuing Week.

Monday, February 29.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital: 1 P.M., Mr. Wm. Lang: Diseases of the Iris.—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Cardio-vascular System.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. F. Wethered: The Diagnostic and Prognostic Value of Tubercle Bacilli in the Sputum.—Mr. Spencer Watson: The Effects of Intra-nasal Obstruction on the General Health.

Tuesday, March 1.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor V. Horsley: The Brain.
LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 4 P.M., Dr. Payne: Seborrhœa and Allied Affections.—Bethlem Hospital: 2 P.M., Dr. Percy Smith: Insanity and Organic Brain Disease.—Charing-cross Medical School: 8 P.M., Dr. Boxall: The Rational Employment of Antiseptics in Midwifery.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—5 P.M. Annual General Meeting.
PATHOLOGICAL SOCIETY OF LONDON.—Adjourned Discussion on Phagocytosis and Immunity by Dr. J. S. Bristowe, Dr. Sidney Martin, Dr. M. A. Ruffer, Mr. C. A. Ballance, Dr. W. Hunter, Mr. E. H. Hankin, Dr. E. A. Wright, Dr. J. C. Adami, Mr. Cartwright Wood, Mr. T. J. Bokenham, and others. Card Specimen by Dr. C. Slater: Cultures and Preparations of Leprosy Bacilli.

Wednesday, March 2.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Theodore Williams: Asthma.—Royal London Ophthalmic Hospital: 8 P.M., Mr. A. Stanford Morton: Ocular Paralysis.—Parkes Museum (Margaret-street, W.): 1 P.M., Dr. Louis C. Parkes: Communicable Diseases.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Handfield Jones and Dr. Horrocks. Three papers on Cæsarean Section will be read by Drs. Leith Napier, John Shaw, and Cullingworth.

Thursday, March 3.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Professor W. P. Ker: The Progress of Romance in the Middle Ages.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Arkle: Pathological Demonstration—Tuberculosis.—National Hospital for the Paralysed and Epileptic: 2 P.M., Mr. B. Brudenell Carter: Ocular Symptoms in Diseases of the Nervous System.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Dr. Woakes: Necrosing Ethmoiditis.
SOCIETY OF ARTS.—4.30 P.M. Surgeon-General Sir William James Moore: Indian Sanitation and the International Congress of Hygiene.
HARVEIAN SOCIETY (Stafford Rooms).—8.30 P.M. Mr. Lockwood and Mr. Cosens: Traumatic Infection (illustrated with Micro-photographs). Dr. Lowers: A case of Face Presentation illustrating the Value of Axis Traction Forceps.

Friday, March 4.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Theodore Williams: The Compressed Air Bath and its Uses.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Professor Crookshank: Erysipelas and Suppuration (Streptococci).—Charing-cross Medical School: 8 P.M., Dr. Boxall: Obstetric Operations (a practical demonstration with mannikin and stillborn fœtus).
WEST KENT MEDICO-CHIRURGICAL SOCIETY (Greenwich-road).—8 P.M. Mr. Bruce Clarke: The Radical Cure of Prostatic Enlargement by the Galvano-cautery.—Dr. Lewis Jones will undertake the management of the Electrical Apparatus.
ROYAL INSTITUTION.—9 P.M. Professor L. C. Miall: The Surface-Film of Water and its Relation to the Life of Plants and Animals.

Saturday, March 5.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Insanity and Syphilis.
ROYAL INSTITUTION.—3 P.M., Right Hon. Lord Rayleigh: Matter, at Rest and in Motion.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 25th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 19	29·34	E.	30	..	40	36	25	..	Overcast
,, 20	29·32	E.	33	32	45	43	30	·05	Overcast
,, 21	29·45	S.W.	43	43	54	47	32	·26	Cloudy
,, 22	29·52	S.W.	45	43	78	52	42	·02	Overcast
,, 23	29·66	N.E.	39	38	77	50	37	..	Bright
,, 24	29·79	N.E.	42	40	61	49	39	·10	Raining
,, 25	29·91	S.E.	40	40	53	45	40	·17	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

MORE DRINKING.

WE record with shame and regret the fact that last year the United Kingdom drank more than the year before to the amount of one million and three quarters. The consumption of spirits amounted to 30,744,209 gallons, or 1,333,778 gallons more than were consumed in 1890. This is an appalling fact, even though the rate of augmentation of beer consumed is said to be rather below the average. It is our profession that sees the results of this increased traffic in alcohol in the degradation of personal and family life. We cannot pretend to say how it is to be stopped. If the evil could be taken out of the category of questions over which parties fight and make capital, something would be achieved. It is a disgrace to all parties alike.

R. M. C.—1. It is necessary if an unassailable right is desired. The prefix is often accorded by courtesy to Bachelors of Medicine. 2. It is not incorrect. It is a matter of taste. Too much assertion of one's titles, however good they are, is in bad taste.

Victoria.—The Brussels would appear to be the only available degree under the circumstances stated by our correspondent.

Tyro.—We think not, but application had better be made to the secretary of the College.

CLUB DOCTORS AND THEIR PATIENTS AT CHUDLEIGH.

LOCAL affairs must be rather dull at Chudleigh just now. The *Western Daily Mercury* devotes an article to club doctors and their patients, a large part of which is occupied by the abuse of the local club doctors for alleged disrespect to club patients, and to high praise of the clubs for discarding all the local profession, and, through advertisement in our columns, inviting candidates, who came from all quarters—at least, from Ireland, from France, and from Eastbourne. We must say we are very sceptical as to the truth of the charges brought against the medical men of "insulting" their club patients. This is so entirely contrary to probability and experience that we shall require to have definite facts before we believe it, and we regret that any contemporary should bring such railing accusations against resident medical men in such vague terms. The article ends with a eulogy on the stranger introduced which must be as distasteful to him as the abuse of his brethren with which it is associated, and on which it is based. He has our sympathy.

Mr. A. Codd.—Some have held that water containing salts of lime in abundance may cause digestive disturbance or promote constipation, or may intensify any tendency that exists to calculous disorders; while others have contended that the mineral substances may usefully supply some of the salts required for the construction and repair of tissues, and that the existence of lime-salts in such water is not altogether disadvantageous, especially in the case of young growing subjects. We would refer our correspondent to "A Handbook of Hygiene," by G. Wilson, M.A., M.D. (London: J. and A. Churchill), for further particulars on this point. An official report, containing analyses of the London water-supplies, including that of the Kent Company, is issued monthly. Ordinary washing soda, added in proper proportion, will remove both temporary (carbonate) and permanent hardness (sulphate).

Sanitarian.—The matter was treated pretty fully in THE LANCET of the 16th ult. An instructive sequel will be found in our present issue.

L.S.A.—The possessor of the licence does not confer the privilege of using the title "Dr."

TREATMENT OF DISEASE BY ELECTRICITY.

To the Editors of THE LANCET.

SIRS,—Has not the study and use of electricity been somewhat neglected by the profession? Having seen good results from its use in some cases lately I may mention two as examples. 1. A lady unable to get her food into her stomach save by mechanical means, arising from atony of the muscles concerned in the function of deglutition. She lost health and spirits, became emaciated, after consulting medical men in the town where she was residing, and afterwards in the metropolis, taking a variety of medicines prescribed, but without the least benefit; in despair she went to an electrician, and after a course of his treatment was soon able to take her food as before, and has recovered her health and spirits. 2. A patient of the same operator, still under treatment, informed me that, from troubles and anxiety of mind connected therewith, he by degrees became so dyspeptic that at last his stomach had lost all power, and his mind became weakened as well as his body. He consulted medical men, went through all sorts of tonics, including pepsine, but without the least benefit. Under the electrical treatment his stomach has by degrees regained power; he can enjoy a light breakfast of cocoa and toast &c., and a dinner generally of fish, followed by a milk pudding. He has regained his weight, looks happy, and seems able to reason very well, only he has lost all respect for doctors, and swears by his electrical friend. Not being now in practice, I have never made use of this remedy, but a good many years ago in India when often having to treat cholera cases I used to wish that I might have been able to do so.

The present epidemic in its diffusion, variety, and intensity of symptoms, also in its weakening effects, has some resemblance to cholera, also in treatment, which seems to be nursing and treating symptoms as they occur. One of your correspondents looks upon influenza as a neurotic disease—probably it is—and the brain and eighth pair of nerves (which by-the-by are ganglionic) have to do with it.

In a recent number of THE LANCET Dr. Goodhart, in his interesting lecture on some forms of dyspepsia, one from a "dulled and flabby nervous spleen," states "there is a time to give drugs, and a time when to give drugs is quackery!" The remedy is to give advice. In such cases one might advise change of air to the seaside or some Highland place where the air is pure and dry, as at Balmoral, or to Cairo in the winter; but how many can follow such advice? It is much easier to cross the street and go to an electrician, which would be my advice in such cases as described by Dr. Goodhart, and I should expect thanks from my patient when his cure was completed.

I am, Sirs, yours faithfully,

Feb. 16th, 1892. SENEX.

F.R.C.S.E. &c.—The charges seem to be reasonable and ought to be paid willingly. The nature of the professional service, not to say of the practice, seems to have been somewhat unusual. In such cases it would be well at the outset to have an understanding as to fees.

Dentist.—Our correspondent would no doubt be acting advisably in taking the step indicated.

COMPARATIVE MEDICAL LITERATURE.

THE *North Carolina Medical Journal* institutes a comparison between THE LANCET and some American journals. It refers to the library of the Surgeon-General's office as a veritable cemetery of medical periodicals. At or about the time of its *début* thirteen American medical journals were in existence, all of which were worthy representatives of medical science, but with no other foundation than the reputation of the editors as teachers and leaders in thought. In the case of THE LANCET, its present life may be due to the impress and influence of its founder transmitted through successors in the same family—circumstances that are very exceptional. It has, says our contemporary, maintained a distinct standing in its presentation of the literature of medical science that has made it the most popular of the medical journals in the world. The writer asks, "How could the English-speaking doctors of the world supply the loss of such a welcome weekly visitor to their offices?" The article goes on to state that "for the first week of the year 1892 the issue contained 120 double-column pages of reading matter and 80 pages of advertisements, which would be, in the type usually employed in medical text-books octavo size, the equivalent of from 400 to 500 pages." *The North Carolina Medical Journal* advises its readers, if this information should be new to them, "to try a year of teaching from THE LANCET and see if they will not find great profit."

Mr. Ernest W. Greenwood.—Our correspondent seems to be unaware that the name "Albert" has been changed to "Gresham."

INJUSTICE UNDER THE NOTIFICATION ACT.

To the Editors of THE LANCET.

SIRS,—Referring to the letter of "J. W." in this day's LANCET, I should be obliged if you would state whether an urban sanitary authority, or its medical officer, has power to question the accuracy of a certificate given under this Act. A case has come under my notice where Dr. —— gives a certificate that a patient is suffering from a certain fever; a few days after Dr. ——, who takes up the case, certifies that the person is suffering from a lung trouble, and not from any infectious disease. This coming to the knowledge of the authority, they decline to allow the notification fee. Can they refuse it, even though the diagnosis be wrong? Do you know if a legal decision has been given in a similar case? I am under the impression that it has, but cannot come across it.

I am, Sirs, yours truly,

Feb. 20th, 1892. B. M.

*** We are not aware that any legal decision of the sort has been come to, and we trust that it will be long before it is asked for. It is quite clear that cases must arise where diagnosis is doubtful, and on which medical men might differ. A medical man whose diagnosis in a case of notification is challenged would do well not to press his claim *unless he is very confident of being right*. But our correspondent puts his question as if the notifier in this particular case were wrong. Possibly in strict law, even so, if he acted *bond fide* he might be able to compel the payment of his fee by the sanitary authority. But we should not envy him his success. Let such an incident be viewed from the patient's standpoint. The wrongful notification of his disease as infectious within the meaning of the Act might involve his contracting a deadly disease. He is entitled, in case of any doubt, to a second opinion. If it refutes the first one, it clearly should not be persisted in: it should be withdrawn, and with it the demand for a fee.—ED. L.

W. R.—It is not easy, on the information before us, to give an opinion on all the points raised. Thus, in many such districts as the one in question, the culverts with which house-drains were originally connected were not "sewers" properly so-called, but highway drains, and the new culverts are in reality the first sewers provided. As regards the term "new building," its application to existing buildings which undergo modification is limited by Section 159 of the Public Health Act, 1875, where it is enacted that for the purposes of that Act "the re-erecting of any building pulled down to or below the ground floor, or of any frame building of which only the framework is left down to the ground floor, or the conversion into a dwelling-house of any building not originally constructed for human habitation, or the conversion into more than one dwelling-house of a building originally constructed as one dwelling-house only, shall be considered the erection of a new building." Nothing whatever is said to imply that the laying of a new drain constitutes a "new building."

CARPENTER AND DUKES DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—Kindly insert these additional subscriptions to the above fund, and oblige,

Yours faithfully,

50, George-street, Croydon, Feb. 23rd, 1892. WM. F. COLES.

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COMMUNICATIONS not noticed in our present issue will receive attention in our next.

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NEWSPAPERS.—*Western Daily Press, Newcastle Daily Leader, Birmingham Gazette, Sheffield Independent, Scottish Leader, Yorkshire Post, Dundee Advertiser, Glasgow Herald, Leeds Mercury, Bristol Mercury, Health Messenger, English Churchman and St. James's Chronicle, Windsor and Eton Gazette, Reading Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, City Press, Surrey Advertiser, Insurance Record, Guy's Hospital Gazette, South Wales Daily News, Windsor and Eton Express, Times of India, Citizen, Builder, West Middlesex Advertiser, Argyllshire Advertiser, Dartmouth Chronicle, Worcester Herald, New Zealand Herald, Law Journal, Architect, Pioneer Mail, Hereford Times, Banbury Guardian, Derbyshire Advertiser, Bedford County Record, Norfolk Chronicle, Keighley News, Bury Free Post, Canterbury Journal, Madras Times, Evening Mail (Portsmouth), Metropolitan, Newark Herald, Wigan Observer, Croydon Guardian, Scotsman, Shrewsbury Chronicle, Essex Standard, &c.*, have been received.

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